UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: SEP 01 1993

SUBJECT: ON-SCENE COORDINATOR'S REPORT - Removal Action at the Toledo Plate and Window Glass Site, Toledo, Lucas County, Ohio (Site ID #RA)

FROM: Richard Karl, Acting Chief R. Karl
Emergency and Enforcement Response Branch, HSE-5J

TO: Deborah Y. Dietrich, Acting Director
Emergency Response Division, 5202-G

THRU: Jodi Traub, Acting Associate Division Director
Office of Superfund, HS-6J

Attached is the On-Scene Coordinator's (OSC) Report for the removal action conducted at the Toledo Plate and Window Glass site located in Toledo, Lucas County, Ohio. The report follows the format outlined in the National Contingency Plan, Section 300.165. This removal began on May 4, 1992, and was completed on October 26, 1992. The OSC for this removal action was Jason H. El-Zein.

The site posed an immediate threat to health and the environment. The action was taken to mitigate threats posed by the presence of open and leaking drums of acids, corrosives, paint waste, solvents, and other ignitable materials. The Toledo Plate and Window Glass building was also deemed to be a threat due to the presence of friable asbestos-containing material.

Costs under the control of the OSC are estimated at $603,004.00, of which $558,281.60 was for the Emergency Response Cleanup Services contractor.

Any indication in this OSC Report of specific costs incurred at the site is only an approximation, subject to audit and final definitization by the U.S. EPA. The OSC Report is not a final reconciliation of the costs associated with a particular site.

Portions of the OSC Report appendices may contain confidential business or enforcement-sensitive information and must be reviewed by the Office of Regional Counsel prior to release to the public.

This site is not on the National Priorities List.

Attachment

cc: Ohio Department of Natural Resources, w/OSC Rpt
T. Johnson, U.S. EPA, OERR, 5202-G, w/OSC Rpt

bcc: N. Zusman, CS-3T, w/OSC Rpt
T. Lesser, P-19J, w/OSC Rpt
O. Warnsley, CRU, HSRLT-5J, w/OSC Rpt
R. Mayhugh, HSC-9J, w/OSC Rpt
B. Ramsey, Secretary, NRT, OS-120, w/OSC Rpt
D. O'Riordan, R-19J, w/OSC Rpt
R. Karl, HSE-5J, w/OSC Rpt
J. Cisneros, HSE-5J, w/OSC Rpt
R. Powers, HSE-GI, w/OSC Rpt
J. El-Zein, OSC, HSE-GI, w/OSC Rpt
ESS Reports Coordinator, HSE-5J, w/OSC Rpt
EERB Site File, HSE-5J, w/OSC Rpt

ON-SCENE COORDINATOR'S REPORT

CERCLA REMOVAL ACTION

TOLEDO PLATE AND WINDOW GLASS SITE

TOLEDO, OHIO

SITE ID # RA

DELIVERY ORDER NO. 7460-05-226

Removal Dates: MAY 4, 1992 - OCTOBER 26, 1992

Emergency and Enforcement Response Branch
Office of Superfund
Waste Management Division
Region V
United States Environmental Protection Agency

EXECUTIVE SUMMARY

Site/Location: Toledo Plate and Window Glass Site, Toledo, Lucas County, Ohio
Removal Dates: May 4, 1992 - October 26, 1992

INCIDENT DESCRIPTION:

The Toledo Plate and Window Glass (TPWG) site consists of a 120,000 square foot building situated on a 1.9-acre city block located in Toledo, Lucas County, Ohio. The site is surrounded by light industry, businesses, and residences. The removal action was undertaken to mitigate threats to public health and the environment posed by the presence of open and leaking drums and containers of paints, acids, corrosives, metals, lab chemicals, paint wastes, solvents, and other ignitable materials. The TPWG site posed an additional threat due to the presence of friable asbestos-containing material (ACM) throughout the building. These materials posed potential threats through direct contact, fire or explosion, and release of hazardous substances or contaminants to the environment.

ACTIONS TAKEN:

The United States Environmental Protection Agency (U.S. EPA) began a removal on May 4, 1992. The following emergency removal activities were performed: partial drums of waste were consolidated; full drums of waste were packed in 85-gallon salvage drums; labpack materials were overpacked in 30-gallon drums and 5-gallon pails; RCRA empty drums and assorted empty containers were crushed or cut up for disposal; non-hazardous debris was collected throughout the site; asbestos and ACM was removed from throughout the TPWG building; all surfaces and areas from which asbestos and/or ACM were removed underwent pressure washing and encapsulation; and all wastes were transported off site for disposal.

During the removal action, hazardous substances or contaminants were landfilled, treated or reprocessed, as appropriate. Seven-hundred-fifty cubic yards (cu. yd.) of asbestos and asbestos-containing material, 928 cu. yd. of construction debris and 26 cu. yd. of RCRA-empty drums were landfilled. The alkaline and corrosive materials were removed for treatment. This material included: 175 gallons of acid liquids and 435 gallons of alkaline liquids. The flammable materials were removed for reprocessing. This material included 2,200 gallons of flammable liquids and 4 drums of labpacks.

The preceding information is summarized in the waste disposal summary which appears as Table 1. All off-site disposal facilities were in compliance with the U.S. EPA off-site policy at the time of transportation and/or disposal of the wastes. All actions taken were consistent with the National Contingency Plan.

The removal was completed on October 26, 1992, at an estimated cost under control of the OSC of $603,004.00, of which $558,281.60 was for the Emergency Response Cleanup Services contractor. The OSC was Jason H. El-Zein.

On April 24, 1993, after the removal action was completed, a fire raged through the empty building, destroying all but the western section. Fire investigators have determined that arson, most likely set by vagrants, was the cause of the fire.

Jason H. El-Zein 6-9-1993

Jason H. El-Zein, On-Scene Coordinator — Date
Emergency and Enforcement Response Branch
United States Environmental Protection Agency
Region V

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Office of Superfund, U.S. EPA, Region V

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Site ID#: RA Delivery Order #: 7460-05-226

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1-B - Enforcement
1-C - Site Safety Plan
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1-F - Site Monitoring Logs (Air, etc.)
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3. TECHNICAL FILES

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* Portions of these OSC Report Appendices may contain confidential business information or enforcement-sensitive information and must be reviewed by the Office of Regional Counsel prior to release to the public.

* Note that certain files for this site are maintained elsewhere by EERB; these appendices are those files maintained by the OSC during the removal action.

1.0 SUMMARY OF EVENTS

1.1 Location/Initial Situation

The Toledo Plate and Window Glass (TPWG) Company is located in an old industrial neighborhood at 1042 Utica Street, Toledo, Lucas County, Ohio, about 0.5 mile northwest of the Maumee River (Figure 1).

The 120,000-square-foot building consists of two stories and a basement. It is situated on a 1.9-acre city block, surrounded by light industry, businesses, and residences. The TPWG facility is bordered by Elm Street and Tiger Products, Inc., on the north; Lagrange Street and Star-Elling Rug Cleaning Co. on the south; George Street and A. Edelstein & Son, Inc., on the east; and Utica Street and Bob's Auto Repair on the west (Figure 2). The site topography is flat and the site is paved with asphalt and/or concrete on the northeast, northwest and southwest sides of the building. A dirt road runs along the southeast side of the building.

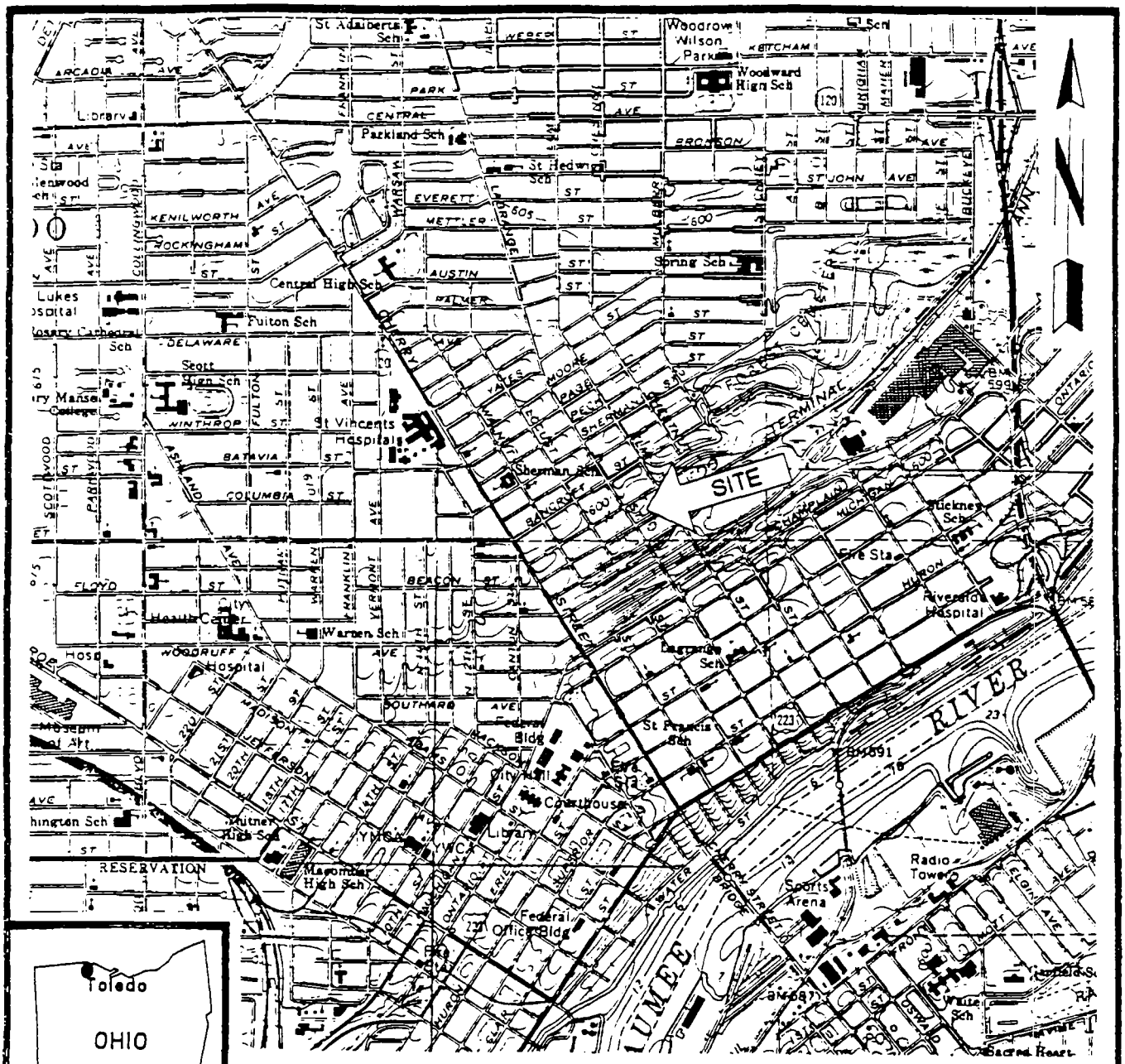
TPWG was a manufacturer of secondary mirror glass and operated out of the building at 1042 Utica Street. The building was constructed in 1905, and was initially purchased by TPWG in 1919. TPWG operated at 1042 Utica Street until it declared Chapter 13 bankruptcy in 1990. In May 1991, TPWG filed Chapter 7 bankruptcy. At this point, Fifth Third Bank, Toledo, Ohio, took possession of the facility and liquidated all the equipment and other assets in the building.

At the time of the initial site assessment (April 22, 1992), drums and other containers, as well as large fragments of asbestos-containing pipe insulation, were scattered throughout the building. In addition, 12 inches of standing water was found throughout the building's basement. Doors were open on the northwest and southeast sides of the building, allowing unrestricted access to the ACM and the drums and containers of chemicals. A semitrailer, staged in a vacant lot across from the TPWG building, was found to contain drums and containers believed to belong to the TPWG facility.

1.2 Previous Actions/Site History

In September 1986, TPWG notified the Ohio Environmental Protection Agency (OEPA) that the facility contained hazardous wastewater treatment sludges from electroplating operations, RCRA waste number F006, as defined in 40 CFR, Part 302.4.

On February 19, 1991, the Toledo Fire Department contacted the OEPA regarding the presence of drums and containers at the TPWG facility. OEPA On-Scene Coordinator (OSC) Mike Gerber and Colleen Weaver of the OEPA Division of Hazardous Waste responded to the site. OEPA conducted several site surveys of the abandoned TPWG facility. The survey identified approximately 300 assorted drums and containers in the



U.S.G.S. 7.5-Minute Topographic Map
Toledo, Ohio Quadrangle, 1965/Photorevised 1980
2 5/8" = 1 Mile

FIGURE 1

SITE LOCATION MAP

TOLEDO PLATE GLASS SITE

TOLEDO, LUCAS COUNTY, OHIO

NOT DRAWN TO SCALE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DRAWN BY S.J. WONG	DATE 2/8/93	PAN# E0H0959FBA
APPROVED BY A. BUSHER	DATE 2/8/93	TDD # T05-9210-024

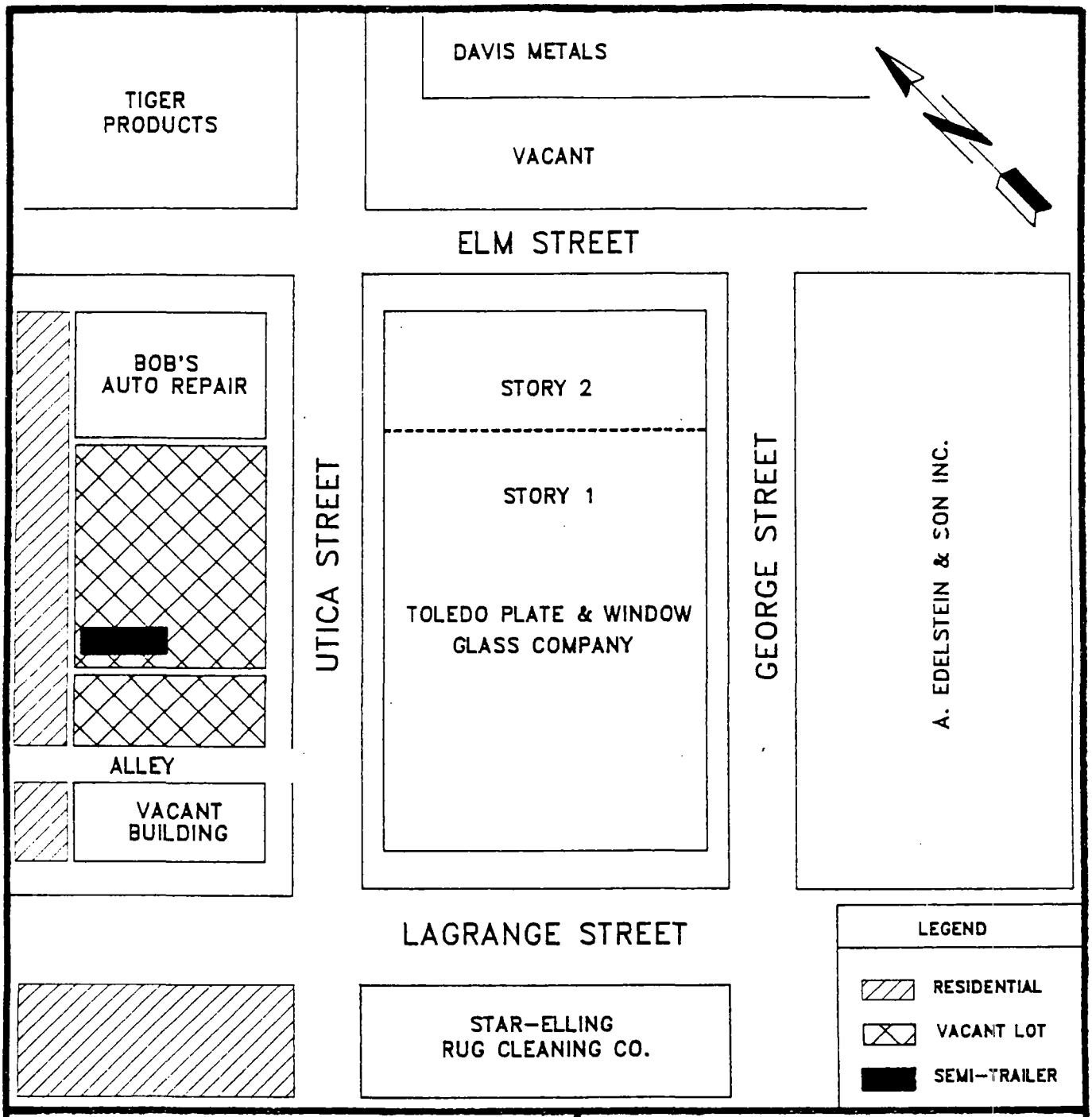


FIGURE 2

SITE SKETCH

TOLEDO PLATE GLASS SITE

TOLEDO, LUCAS COUNTY, OHIO

NOT DRAWN TO SCALE

DRAWN BY S.J. WONG	DATE 2/7/93	PAN# E0H0959FBA
APPROVED BY A. BUSHER	DATE 2/7/93	TDD # T05-9210-024

building. In addition, OEPA personnel also determined that a trailer in a vacant lot across Utica Street contained 28 drums and 5-gallon containers of unknown contents suspected to be derived from the TPWG operations.

In April 1992, the OEPA brought the TPWG facility to the attention of the U.S. EPA. In response, the U.S. EPA tasked its Technical Assistance Team (TAT) to perform a site assessment and evaluate the site's threat to human health and the environment.

On April 22, 1992, TAT members Ron Fodo, Emily Landis, and Sylvia Wong joined U.S. EPA OSC Steve Renninger at the TPWG facility to conduct the site assessment. OEPA OSC Mike Gerber and Colleen Weaver of the OEPA Division of Hazardous Waste were also present. The team entered the building through an unlocked door on the northwest side of the building. This door and another unlocked door on the southeast side of the building provided unrestricted access to the building.

An undetermined number of 55-gallon drums, 5-gallon pails, and other assorted small containers were found scattered throughout the building. The drums, pails, and small containers were all in various states of deterioration. Many of the drums were found in the basement of the facility either standing or floating in 12 inches of water. The water had accumulated in the basement after electrical power had been shut off and the basement sump pumps had ceased working. In addition, twenty-eight 55-gallon drums and five 5-gallon containers were found in a semitrailer in the vacant lot across from the TPWG building.

The TAT inventoried as many of the drums, pails, and small containers as possible and noted contents and label information. Contents from several drums were pH field screened and/or collected for laboratory analysis. Results of the pH field screening indicated some of the samples were highly corrosive. These results were later supported by laboratory analysis which indicated sample characteristics of high corrosivity as well as ignitability/flammability.

Based on field observations and laboratory analysis, OSC Renninger was able to establish that the TPWG site was a substantial threat to human health and the environment. These findings were documented in a Site Assessment Report submitted by the TAT to the U.S. EPA under TDD# T05-9204-016.

1.3 Threat to Public Health and/or the Environment

The conditions at the TPWG site meet the criteria for a removal action as stated in the National Contingency Plan (NCP), Section 300.415 (b)(2), specifically:

- Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances or pollutants or contaminants;

The TPWG site is located in a mixed residential and commercial area. The nearest residences and commercial locations are approximately 50 feet from the TPWG site. The materials inside the facility are considered hazardous by virtue of their ignitability (D001) as defined in 40 CFR 261.21(a)(1) and/or corrosivity (D002) as defined in 40 CFR 261.22(b)(1). In addition, asbestos-containing materials (ACM) were found throughout the site. Asbestos is considered a human carcinogen by the International Agency for Research on Cancer (IARC), a hazardous substance, and a priority pollutant. Unrestricted access to the facility creates a threat to human safety through direct contact. This situation is a threat to public health and the environment.

- o Hazardous substances or pollutants or contaminants in drums, tanks, or other bulk storage containers, that may pose a threat of release;

The TPWG site has unrestricted access available to approximately three-hundred 55-gallon drums, pails, and assorted small containers inside the building and in a semitrailer. Samples taken from the various drums and containers have identified the contents to be hazardous wastes by virtue of ignitability and corrosivity characteristics. During the site investigation, the OSC noted the basement of the building was flooded with approximately 12 inches of water. Many of the drums and containers found in the basement were affected by rust, a factor in drum failure. Deterioration of the drums and/or containers could lead to a release of hazardous wastes.

In addition, ACM was found throughout the site. Trespassers entering and moving through the TPWG facility have the potential to disturb uncontained asbestos and cause it to become airborne. Once airborne, the asbestos fibers could migrate outside the facility and affect the nearby residents.

- o Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

Northwest Ohio typically has substantial rainfall during the spring and autumn. As such, flooding in the basement will continue to occur as long as the sump pumps remain non-operational. These pumps are non-operational because electrical power can not be reestablished to the building due to damage by vandals. Continued wet conditions and accumulated waters will further the deterioration of drums and other containers, potentially leading to a release of hazardous materials.

- o Threat of fire or explosion;

Laboratory analyses have proven that at least a portion of the materials on site are hazardous wastes by virtue of ignitability (flash point <140°F) as defined in 40 CFR 261.21. These materials are in and around badly deteriorated drums which are readily accessible to the public.

The TPWG site has cardboard packing material scattered throughout and the floors of the building are wood, making the entire site a potential fire hazard.

In addition, summer temperatures in northwest Ohio can be in excess of 90°F. Laboratory analysis of samples collected from containers at the TPWG site have indicated flash points below 90°F. As such, the potential exists for container contents to ignite and/or cause an explosion when environmental conditions cause them to reach and/or exceed flash point temperatures.

1.3.1 Natural Resource Damage

No formal study was undertaken as to the dangers of the solvents, paints, paint wastes, lab chemicals, and asbestos pose to our natural resources. However, risks involved were noted and the removal undertaken as quickly as possible.

1.4 Attempts to Obtain a Response by Potential Responsible Parties

The TPWG Company ceased operations on March 29, 1991, when Chapter 7 bankruptcy was declared. Fifth Third Bank of Toledo, the mortgage holder, foreclosed on the property and liquidated all machinery and other assets. Fifth Third has continually denied all responsibility for the property and its environmental problems in spite of being the owner of record. The TPWG Company is bankrupt and claims to lack the funds necessary to address the problems.

On May 5, 1992, Nancy-Ellen Zusman, Office of Regional Counsel (ORC), gave Richard Bauer verbal notification of his potential liability. Mr. Bauer alleged that he had no assets, and that the Fifth Third Bank had taken possession of the facility and has denied him access.

Written Notice letters were sent to Richard Bauer, Robert Savage, and Bruce French on May 15, 1992.

A CERCLA Section 104(e) Information Request Letter was sent to Fifth Third Bank on May 14, 1992. A response was received from the Bank dated June 4, 1992. The response listed individuals with more information pertaining to the site. Information Request Letters dated June 18, 1992, were mailed to eleven individuals identified in the Bank's response.

The U.S. EPA ORC will continue to pursue this line of investigation for cost recovery purposes.

1.5 Federal Actions Taken

On April 29, 1992, verbal authorization for $50,000 was approved by Acting Emergency and Enforcement Response Branch Chief, Thomas Geishecker, for the removal action at the TPWG site. On May 8, 1992, a verbal increase to a $100,000 ceiling was approved by Associate Division

Director for Waste Management Division, Norman Neidergang. On May 15, 1992, an Action Memorandum was signed by David Ullrich, Director, of Waste Management Division, for a total $689,800 in order to mitigate imminent and substantial threats to public health and the environment at the site. The July 31, 1992, Transmittal Memorandum, Region V Request for Concurrence on a Proposed Nationally Significant Removal Action at the site, identified the proposed action as the removal and disposal of the remaining asbestos, and requested an increase of the site ceiling from $689,800 to $1,329,500. Henry Longest, Director, Office of Emergency and Remedial Response concurred on this request on August 3, 1992. On April 29, 1992, a Delivery Order for $50,000 was approved for the ERCS contractor. On June 3, 1992, the Delivery Order ceiling was raised to $400,000. On September 1, 1992, the delivery order was modified to increase the ceiling by an additional $300,000, raising the ceiling to $700,000. The cleanup was conducted by ITEP, Inc., the Emergency Response Cleanup Service (ERCS) contractor. The major phases of the removal action are presented below and summarized in the site activity log (Attachment A).

1.5.1 Preliminary Arrangements - Community Meeting

On May 1, 1992, OSCs Jason El-Zein, Ralph Dollhopf and Steven Renninger, and Sandra Basham of the U.S. EPA's TAT met on site with representatives of various Lucas County and Toledo City agencies including fire departments, police departments, emergency medical services, Hazardous Materials Response Team, and emergency planning agencies. Representatives of the Toledo Water Department, Toledo Edison, and other service agencies were also in attendance. The OSCs explained the situation at the site and outlined the assistance required from the various agencies. This included the closing of Utica Street for an indefinite period. The OSCs explained planned removal operations and answered any questions. A contingency plan, to be followed by local emergency service groups in the event of an on-site emergency, was also outlined at this time. Various portions of this document were to be drafted by the pertinent agencies with the U.S. EPA compiling the information and preparing the final product. The completed contingency plan was to be made available to the various agencies at a contingency plan meeting scheduled for May 4, 1992.

1.5.2 Preliminary Arrangements - Contingency Plan Meeting

On May 4, 1992, OSCs Renninger, El-Zein, and Dollhopf, and Sandra Basham of the U.S. EPA's TAT met with representatives of the Toledo Fire Department, Toledo Police Department, Toledo Haz-Mat Team, Lucas County LEPC, St. Vincent's Hospital, and other emergency services at Toledo Firehouse #2. Due to the failure of one agency to complete a section of the contingency plan, it was not available for distribution as planned. However, the proposed plan was discussed in detail, and all questions were addressed.

The TPWG contingency plan was made available to all agencies on May 6, 1992.

1.5.3 Phase I Activities - Removal of Chemical Waste

1.5.3.1 Preliminary Arrangements - Safety and Support

On May 1, 1992, U.S. EPA OSCs Renninger, El-Zein, and Dollhopf, Response Manager (RM) Mike Bowser of ERCS, and Sandra Basham of U.S. EPA's TAT met at the site to discuss the scheduled cleanup activities and technical approach. A work zone and perimeter air monitoring schedule was devised at this time and the site safety plan was approved. Arrangements were made with Mr. Joseph Patay of the Department of Public Safety, City of Toledo Office, to close Utica Street to through traffic for the duration of the project. Access to a water hydrant on the corner of Utica and Elm Streets was also arranged through the Toledo Water Department.

On May 4, 1992, the ERCS crew and equipment were mobilized to the site and site mobilization was initiated. A schematic of the various work zones is presented in Figure 3. From May 4 through July 30, 1992, a security service was employed to provide 24-hour site security. This arrangement was deemed necessary because gang-related violence, theft, and vandalism were common in the area. Security was continued through July 30, 1992, when the majority of the containerized waste was shipped off site for disposal.

1.5.3.2 Water Removal

As the 12 to 18 inches of standing water in the basement of the TPWG building needed to be removed before work could begin, the OSCs discussed the possibility of pumping the water directly into city sanitary sewers with Mr. Lee Pfouts, the representative from the Toledo Water Treatment Plant. He stated that acceptance of the waste water would be contingent upon results of analyses run on samples of the water. On May 1, 1992, members of TAT entered the building in level B personal protective equipment (PPE) to collect the samples which were split with Mr. Pfouts. Water samples were analyzed for pH, metals, and Chemical Oxygen Demand (COD).

On May 5, 1992, Mr. Pfouts informed the OSCs that levels of contaminants in the water samples did not exceed the capacity of the publicly owned Treatment Works and that pumping of water into the sanitary sewers could begin. Water was removed using several large-capacity pumps until the majority of the basement was dry. This operation took approximately 5

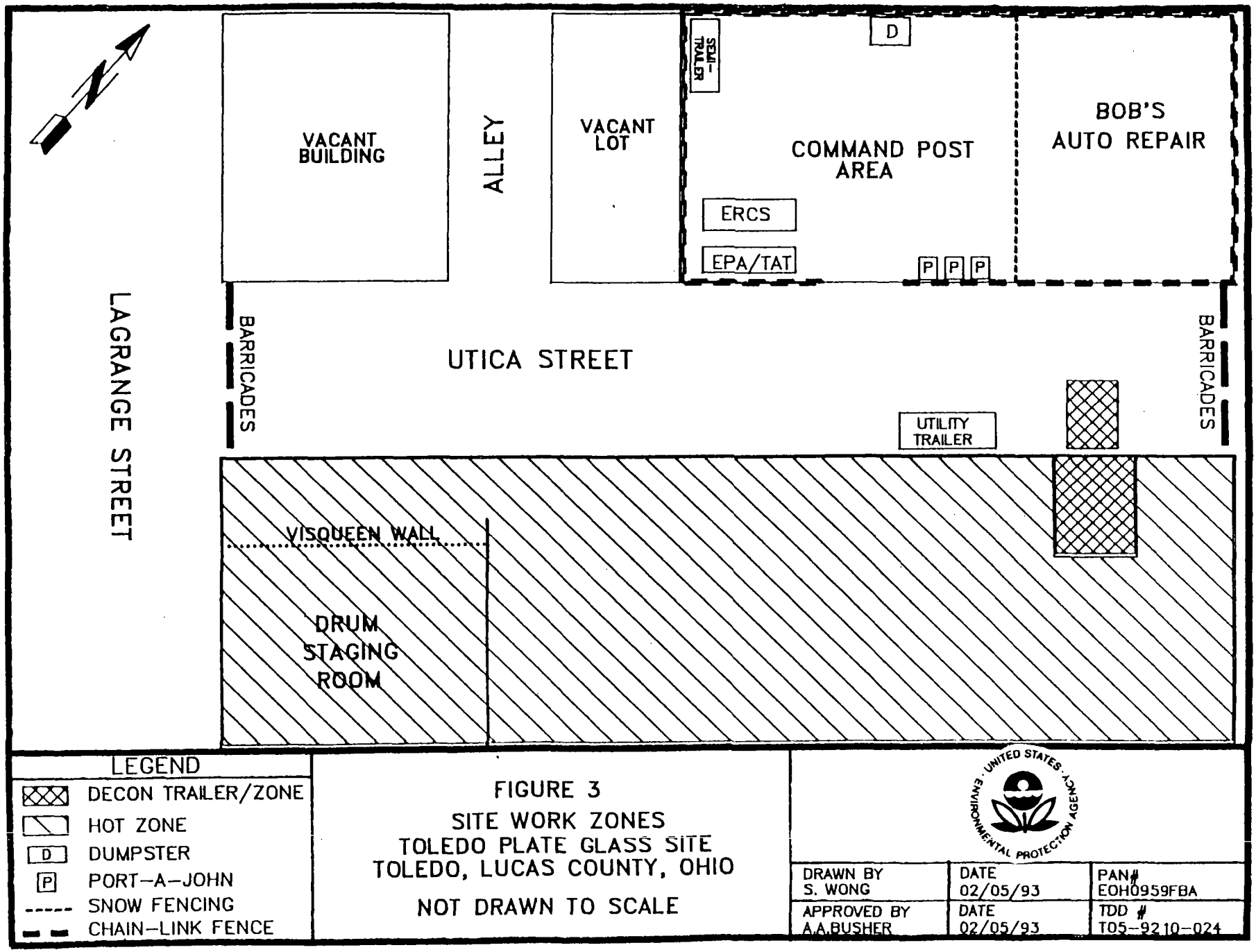


FIGURE 3
SITE WORK ZONES
TOLEDO PLATE GLASS SITE
TOLEDO, LUCAS COUNTY, OHIO

NOT DRAWN TO SCALE

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DRAWN BY S. WONG	DATE 02/05/93	PAN# EOH0959FBA
APPROVED BY A.A.BUSHER	DATE 02/05/93	TDD # T05-9210-024

days (May 5 through 9). After the initial removal, water was pumped from the basement on an "as needed" basis.

1.5.3.3 Restricting Building Access

From May 4 through May 6, 1992, IT subcontractors secured the TPWG building against unauthorized entry by covering all windows and doors with sheets of plywood. Before boarding, all areas of broken or missing window panes were covered with visqueen and sealed with duct tape to prevent the release of airborne asbestos. Windows on the southern corner of the building were sealed but left unboarded to allow light to enter, as this area had been designated the drum staging area. Two-man doors on the northwest side of the building and one loading bay door on the southeast side of the building were secured but left unboarded (Figure 4). The doors were to serve as points of worker access to the building, while the loading door would be used to load drums and overpacks.

1.5.3.4 Asbestos Assessment, Abatement and Control

Once the majority of the water was removed from the basement and explosion-proof lights were installed throughout the building, it became apparent that the asbestos problem at TPWG was much more severe than originally anticipated. Large quantities of ACM were discovered on all floors of the building and asbestos fibers and dust were noted covering most surfaces. At this time, the OSCs deemed it too hazardous to attempt to address the drums and containers until the ACM had been stabilized.

To ensure maximum safety for all personnel, it was decided that specified work zones on the first floor of the TPWG building should be cleared of ACM and only asbestos trained and certified workers should enter the building until this was accomplished. The ERCS contractor subcontracted a local asbestos abatement firm to stabilize damaged ACM and to remove it entirely in areas designated by the OSCs.

The abatement crew was mobilized to site on May 7, 1992. They were tasked to: (1) conduct asbestos abatement activities around the first floor tank enclosure on the west side of the TPWG building; (2) clear all visible debris from the garage area located at the south end of the building; (3) repair pipe insulation along a designated corridor using re-wettable cloth; and (4) clear all visible ACM from a 100-square-foot area, bag it, dispose of it in a rolloff box, and then spray the designated area with encapsulant.

The tank enclosure of TPWG (Figure 4) was designated for immediate abatement activity due to the severely deteriorated condition of the asbestos in that area. The garage area (Figure 4) was also designated for immediate cleanup because it was to be used as the drum staging area for the chemical wastes to be collected and removed from the TPWG facility.

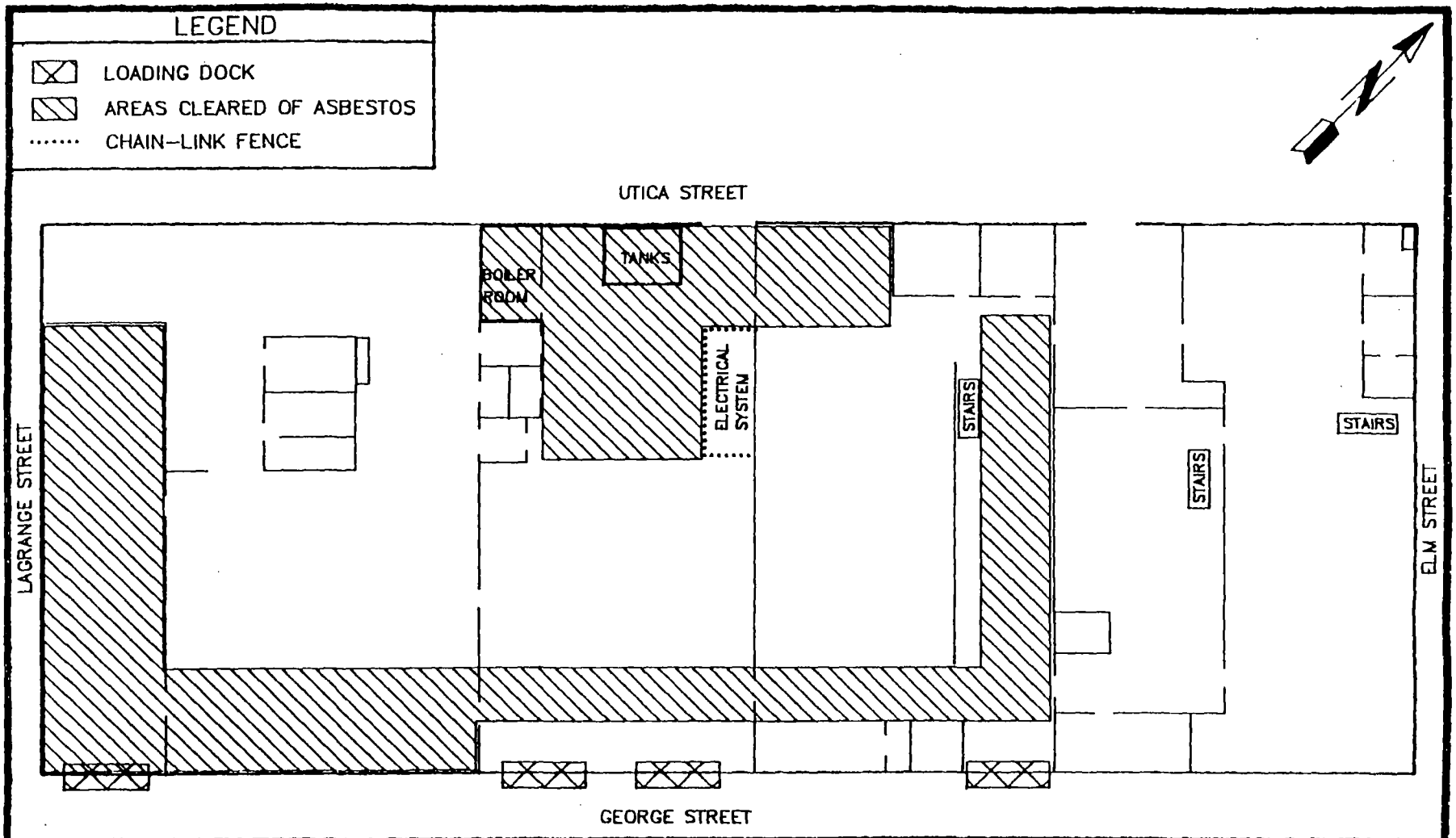


FIGURE 4

ASBESTOS REMOVAL, MAY 7 – MAY 16, 1992
TOLEDO PLATE GLASS SITE
TOLEDO, LUCAS COUNTY, OHIO

NOT DRAWN TO SCALE

DRAWN BY S. WONG	DATE 02/05/93	PAN# E0H0959F8A
APPROVED BY A.A.BUSHER	DATE 02/05/93	TDD # T05-9210-024

The ERCS subcontractor conducted the asbestos abatement using equipment and materials, and following procedures and practices consistent with those detailed in the Occupational Safety and Health Administration (OSHA) regulations, 29 CFR 1926.58, Work Practices and Engineering Controls for Major Asbestos Removal, Renovation and Demolition Operations. Openings were sealed, surfaces were covered, fixtures were decontaminated and encapsulated, containment structures were built and maintained, and warning signs were posted as specified in the regulations. The actual removal of the asbestos and ACM and its subsequent disposal were conducted using wet-removal techniques consistent with the method specified in the OSHA standards.

Air monitoring was conducted throughout abatement activities to ensure worker health and safety and to verify that concentrations of asbestos in the areas having undergone abatement were sufficiently low to be in compliance with U.S. EPA ambient air standards. Phase contrast microscopy (PCM) was the analytical method used for air samples collected during abatement activities. Procedures were carried out in accordance with the NIOSH 7400 method. Following the completion of the abatement work, air samples for the garage, the contractor clean room, and the ERCS airlock were collected on May 8, 1992. Air samples for the tank enclosure were collected on May 13, 1992.

Analytical results for these clearance samples indicated that the concentration of asbestos in these areas was below the EPA ambient air standards. Abatement activities were completed on May 15, 1992.

The initial asbestos abatement phase occurred from May 7 through May 16, 1992. Figure 4 shows the areas of the TPWG building cleared of asbestos during this time.

1.5.3.5 Drum and Container Location and Staging

The ERCS contractor mobilized a special crew of dual-certified (asbestos and hazardous materials) personnel to collect the drums and containers of hazardous materials.

Under direction from the OSC, part of this crew collected drums and containers of hazardous materials throughout the facility and staged them outside the airlock to the drum staging area. Additional crew members used a HEPA-vac and damp towels to clean the collected drums and containers of all visible ACM. The cleaned drums and containers were then passed through the airlock into the drum staging area where workers possessing single certification for handling hazardous materials would stage and sample them.

The majority of the drums and containers located in the basement were moved to the ground floor via a ramp that was constructed over an existing stairway. When it was decided that full 55-gallon drums were too heavy to be safely maneuvered up the ramp, a hole was cut in the basement ceiling and the drums were winched out. A total of ninety-six 55-gallon drums, and approximately 200 smaller drums and containers were

collected and staged in the drum staging area. An additional twenty-eight 55-gallon drums and five 5-gallon containers were removed from the semitrailer located across Utica Street from the TPWG building (Figures 2 and 3). These drums were also placed in the drum staging area.

1.5.3.6 Sampling and Hazard Categorization

After the majority of the drums and containers had been retrieved from throughout the building, cleaned of ACM, and staged in the drum staging area, ERCS chemists opened the retrieved containers, collected samples, and completed drum logs for each. All samples underwent standard hazard categorization testing, which included tests for pH, flammability, combustibility, oxidation potential, and other disposal parameters. Results of hazard categorization testing were recorded on forms for each sample. Hazard categorization results were later utilized to assign the various drums into compatible waste streams. A total of nine waste streams were identified at the TPWG site. They were: acidic liquid; alkaline liquid; caustic solid; flammable liquid; sodium hydroxide solid; inorganic sludge; flammable sludge; miscellaneous debris; and RCRA-empty containers. Composite samples of each waste stream were prepared for submission to various disposal facilities. These waste streams and the number of drums assigned to each are presented in Attachment C.

1.5.3.7 Waste Stream Consolidation

Samples collected by ERCS from all drums and containers were utilized in bench-scale compositing. Materials were combined based on the hazard group to which they had been assigned. The bulking of drums and containers allowed consolidation of samples to be sent for laboratory analysis and reduced the disposal expenses by reducing the total number of containers shipped.

After bench-scale bulking was completed, four disposal groups were identified. They were: RCRA-empty drums; acidic and alkaline liquid; flammable liquid; special waste.

1.5.3.8 Crushing Empty Drums and Containers

A portion of the drums and containers discovered throughout the TPWG building were empty and "RCRA" empty. Additional empty drums were generated through the combination of like waste streams and the consolidation of partially full containers. Empty drums and containers were placed on a visqueen sheet and crushed with the bucket of a front end loader. Empty, crushed drums were then placed into a 20-cubic-yard rolloff box for transport to off-site disposal. A total of 34 cubic yards of crushed, empty drums were generated during the removal activities at the TPWG site.

1.5.3.9 Phase I Demobilization

On May 21, 1992, a gradual reduction of personnel and equipment began. The majority of the crew and equipment was demobilized on May 21, 1992. The ERCS response manager, clerk, and a cleanup technician remained at TPWG to complete transportation and disposal of site waste. In addition, two industrial hygienist and an asbestos certified foreman from ERCS surveyed TPWG at this time to conduct a more detailed assessment of the extent of asbestos contamination in the building. A single office trailer and basic support zone services, as well as 24-hour site security were maintained until all containerized waste was removed from site. On July 30, 1992, OSC El-Zein officially demobilized the site for Phase I activities.

1.5.4 Phase II Activities - Asbestos Abatement

1.5.4.1 Mobilization and Site Set Up

The ERCS contractor was mobilized to the site to conduct Phase II asbestos abatement and final cleanup activities on September 5, 1992. The TAT was mobilized to the site on September 8, 1992. The OSC, ERCS crew, and TAT for air monitoring were all certified asbestos personnel. The vacant lot west of the TPWG building, used as the support zone area during the Phase I cleanup activities, was again designated as the support zone area for the Phase II cleanup activities (Figure 5). Support zone services and equipment, such as trailers, drinking water, and utilities, were mobilized to the site on September 8, 1992. All support zone services and equipment were in place and fully operational by September 15, 1992.

Beginning on September 8, 1992, off-hours site security was in place at the end of each work day. Security conducted regular patrols of the support zone and decon zone perimeters to deter vandalism and prevent unauthorized personnel from entering the building and support zone. Beginning on September 9, 1992, the City of Toledo positioned barricades at both ends of Utica Street to prevent local traffic from using the street during abatement activities.

A shower trailer was mobilized to site on September 8, 1992, and a decontamination zone was established on September 9, 1992. The zone included the area from the shower trailer exterior to the TPWG building and primary and secondary airlocks inside the building. Site personnel "dressed out" in the shower trailer prior to entering the building. Upon exiting the building, personnel underwent gross decontamination, removed and disposed of expendable PPE, stored non-expendable PPE, and then showered before exiting the trailer.

The decontamination zone was inspected by OSC El-Zein and modified several times at his request. OSC El-Zein directed the ERCS to make adjustments to accommodate the high volume of personnel involved in the cleanup and to ensure that essential equipment and supplies were easily accessible to personnel. Final adjustments to the zone were made on September 18, 1992. Figure 6 is a sketch of the decontamination zone.

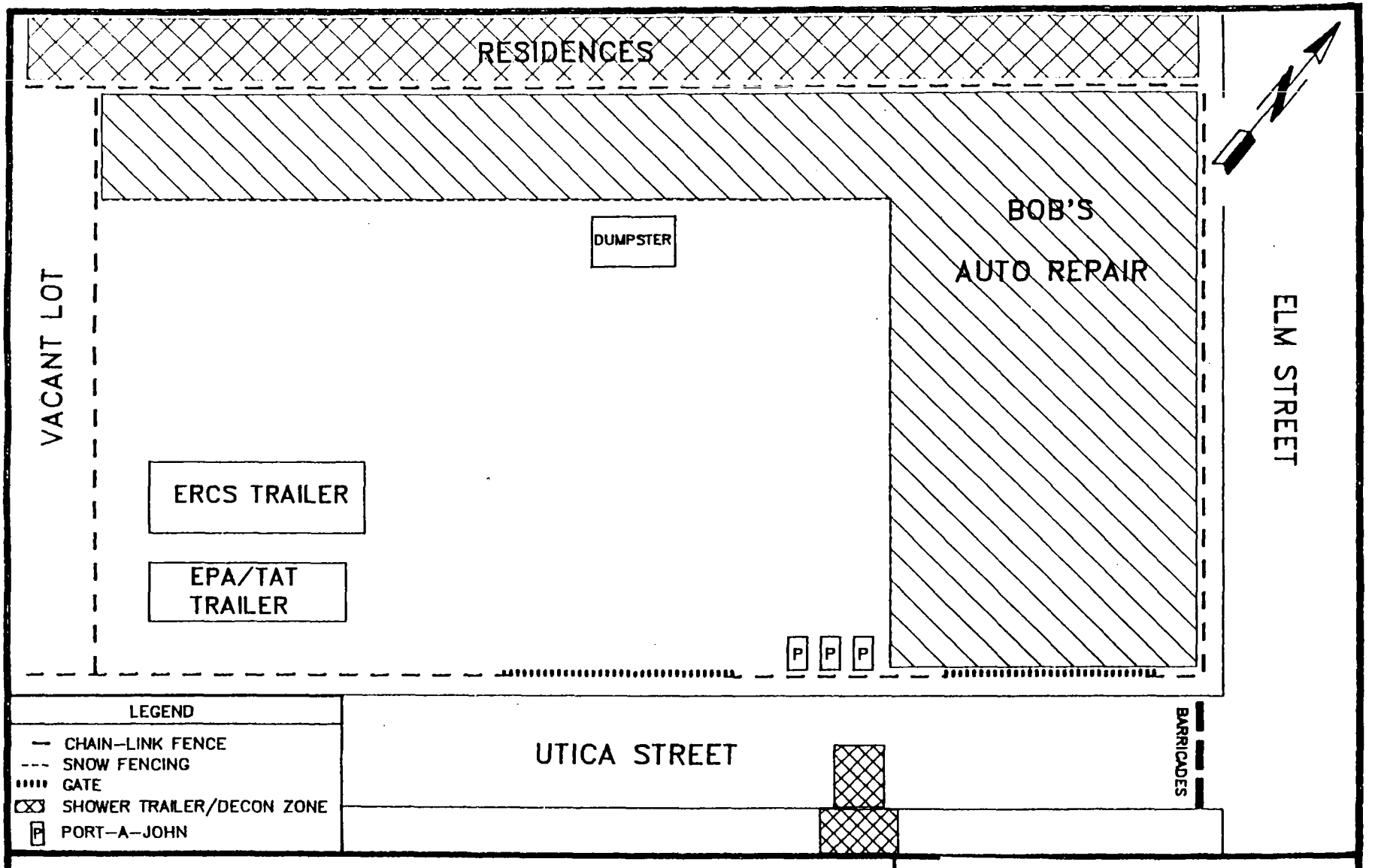


FIGURE 5

COMMAND POST AND SUPPORT ZONE
TOLEDO PLATE GLASS SITE
TOLEDO, LUCAS COUNTY, OHIO
NOT DRAWN TO SCALE

UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

DRAWN BY S.J.WONG	DATE 2/9/93	PAN# EOH0959FBA
APPROVED BY A.A.BUSHER	DATE 2/9/93	TDD # T05-9210-024

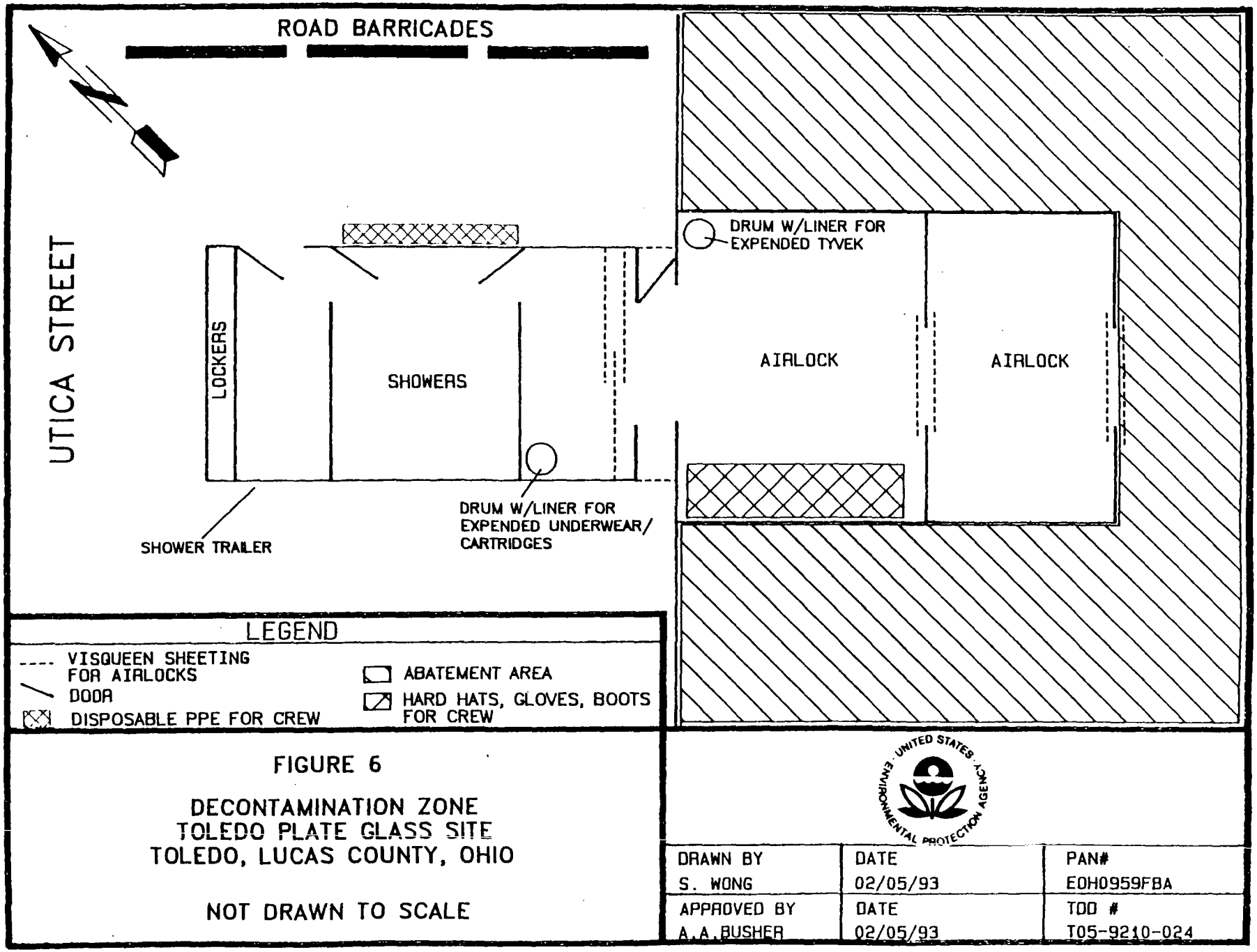


FIGURE 6

DECONTAMINATION ZONE
TOLEDO PLATE GLASS SITE
TOLEDO, LUCAS COUNTY, OHIO

NOT DRAWN TO SCALE

DRAWN BY S. WONG	DATE 02/05/93	PAN# EOH0959FBA
APPROVED BY A.A.BUSHER	DATE 02/05/93	TDD # T05-9210-024

1.5.4.2 Removal of Basement Flood Waters

OSC El-Zein directed the ERCS to conduct a walk through of the building prior to the installation of equipment and the initiation of any abatement activities. During the walk through, conducted on September 9, 1992, the ERCS discovered and reported to OSC El-Zein that the basement of the TPWG building was again flooded with approximately 12 inches of water. The OSC directed the ERCS to take immediate steps to remove the waters from the basement.

Water samples were collected from the basement on September 9, 1992, to determine the feasibility of discharging directly to the City of Toledo sewers. Analysis indicated no significant amounts of contaminants in the water. The OSC received verbal authorization from the City of Toledo to discharge the flood waters directly to the city sewers on September 16, 1992. As a precautionary measure, the OSC directed the ERCS to install and maintain filters on the pumps to ensure that asbestos fibers were not discharged to the sewer along with the water. The pumping of water, 24 hours a day, from the basement began on September 17, 1992, and continued through September 27, 1992. From September 28, 1992, until October 22, 1992, water was pumped from the basement only during working hours.

1.5.4.3 Air Monitoring Program

On September 11, 1992, TAT members Lisa Ende and Ron Bugg were tasked to perform area air sampling and contractor oversight of the asbestos abatement activities conducted at the TPWG facility.

Air samples were collected daily during prep work and abatement activities and as often as necessary to determine that clearance had been achieved in each work area. Samples collected during prep work were used to determine baseline/background concentrations of asbestos in a designated area. Samples collected during abatement activities were used to determine if engineering controls were effectively containing airborne particulate generated during cleanup activities. Air samples were also collected at random to verify the results of personal air monitoring conducted for ERCS personnel.

Clearance samples were collected by aggressive sampling technique after the application of encapsulant to a work area. Aggressive sampling requires the introduction of a "wind source" to stir up asbestos fibers not entrapped in the encapsulant. The OSC approved the introduction of one 19-inch fan into the work areas as a wind source. Three samples were collected in each work area sampled for clearance.

Phase Contrast Microscopy (PCM) samples were collected using low flow and/or hi-volume air samplers. Transmission Electron Microscope (TEM) samples were collected using only hi-volume air samplers. The minimum air flow volume for a low flow air sampler was set at 120 liters. The minimum air flow volume for a hi-volume air sampler was set at 1200

liters. The collection of PCM samples followed NIOSH method 7400; collection of TEM samples followed NIOSH methods 7400 and 7402.

Air samples were sent to Hayden Laboratories in Miamisburg, Ohio, for analysis. Samples collected during prep work and abatement activities were analyzed by Phase Contrast Microscopy. Air samples collected to verify the results of personal air monitoring conducted for ERCS personnel were also analyzed by PCM. Air samples collected for clearance were analyzed by Transmission Electron Microscopy.

Standards for clearance were incorporated from the Asbestos Hazard Emergency Response Act (AHERA) 40 CFR 763 Subpart E, Sections 763.80 - 763.99. A work area was determined to be clear and the cleanup of the area complete when TEM analytical results indicated that the concentration of asbestos in the designated area was equal to or less than 70 asbestos structures per mm^2.

A summary of the analytical results for air samples collected during Phase II activities is shown in Attachment C, Air Monitoring Analytical Results.

1.5.4.4 Cleanup Activities - Technical Approach

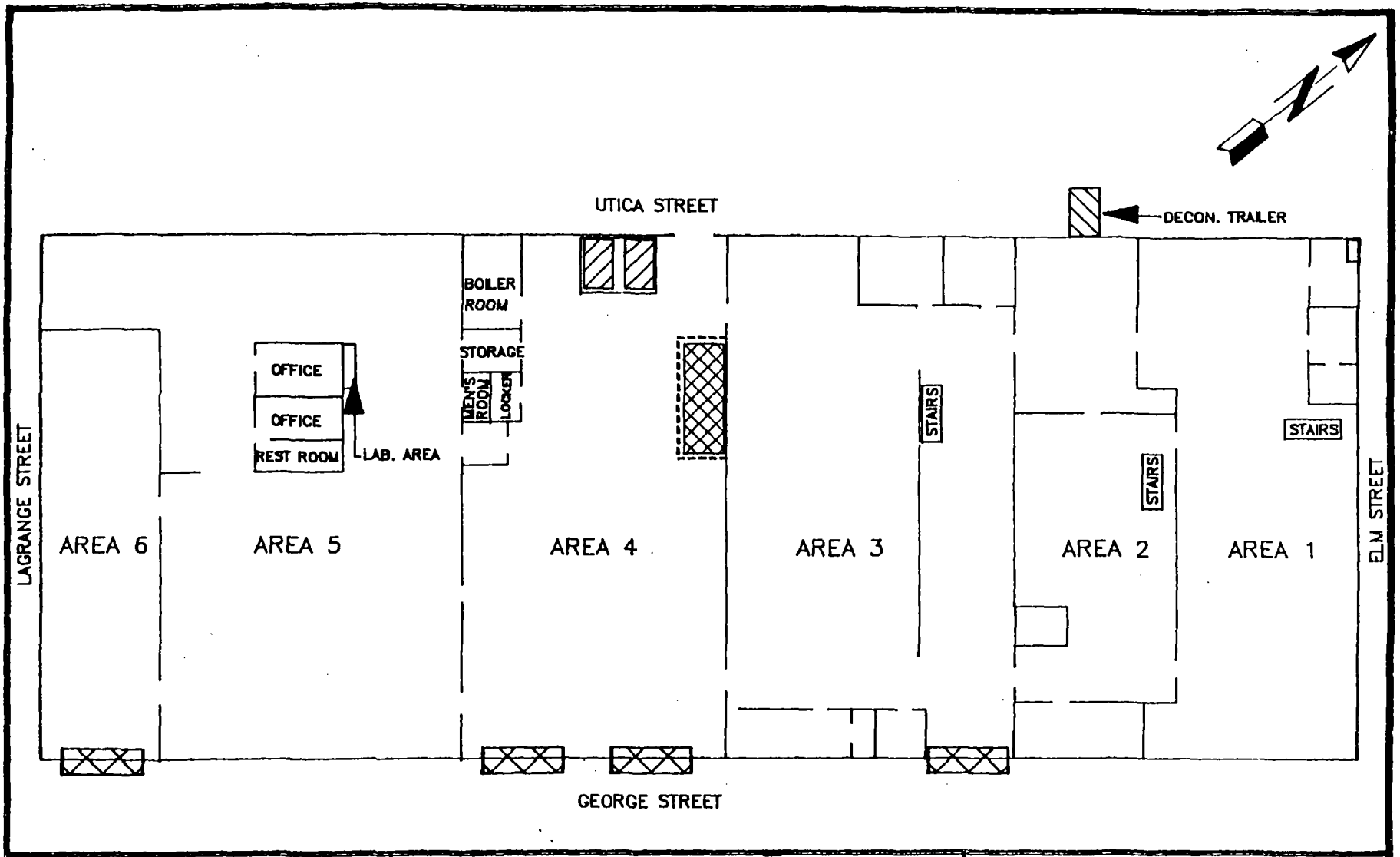
The TPWG building consists of a basement, main floor, and second floor. For the purposes of the asbestos removal, the building was divided into eight cleanup areas; the main floor contained six small cleanup areas (Figure 7), and the basement and the second floor were each treated as a separate cleanup area (Figures 8 and 9).

OSC El-Zein directed the ERCS to begin cleanup activities in Area 6 of the building's main floor and then proceed in reverse order through the remaining main floor areas (Figure 7). The basement and second floor areas would be cleared last. The OSC issued this directive with the intent of minimizing the transportation of asbestos and ACM from contaminated areas to areas already cleared of asbestos.

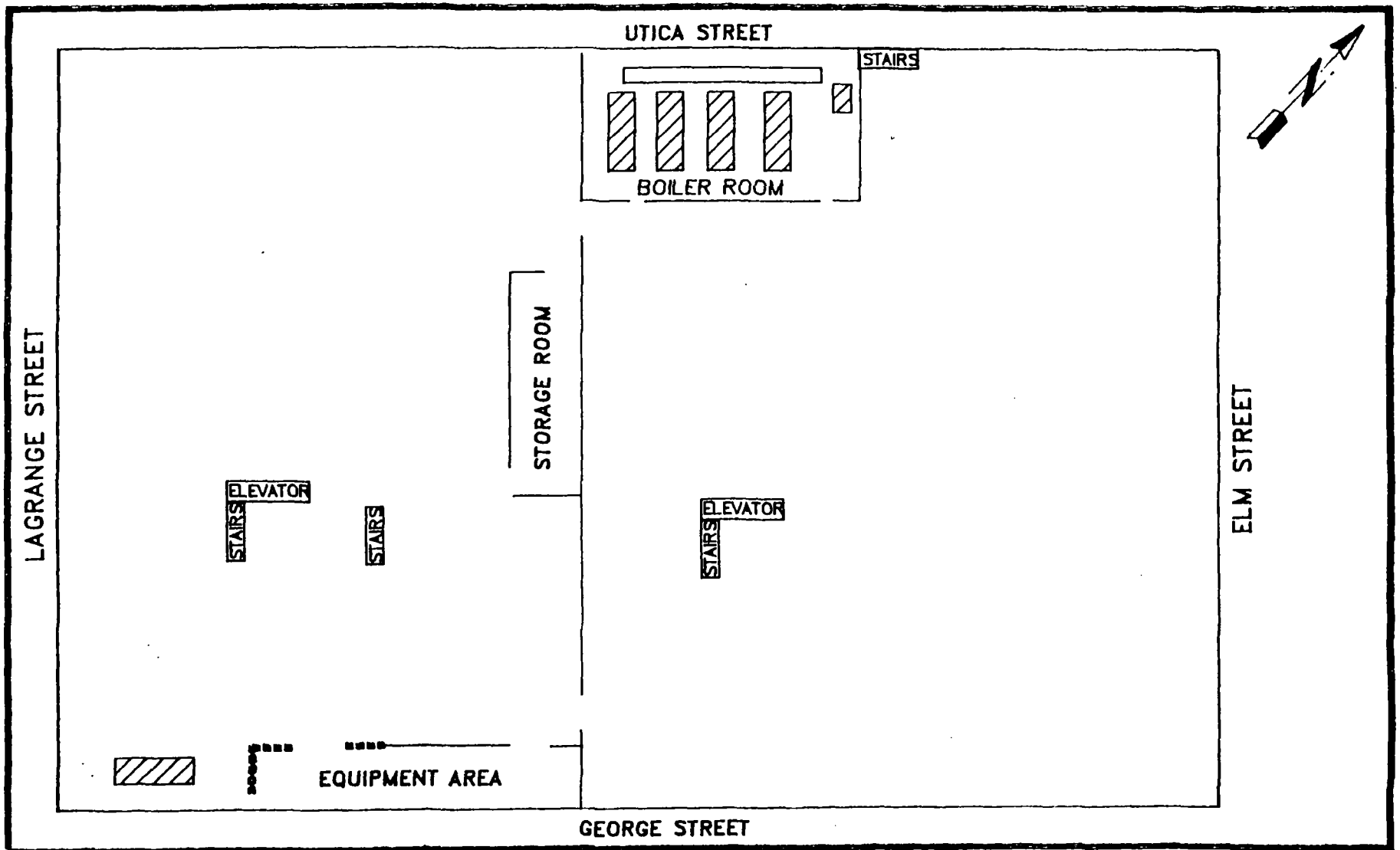
OSC El-Zein deemed all materials inside the building contaminated. As a rule, all contaminated fiber glass insulation and non-cleanable items were considered asbestos-containing materials. The OSC directed the ERCS to remove all visible debris and to clean all objects.

The cleanup of asbestos and ACM for each area of the TPWG building was comprised of preparation work (prep work), abatement activities, visual inspection, pressure washing, and encapsulation. The ERCS performed these activities using equipment and materials and following practices consistent with 29 CFR 1926.58, Work Practices and Engineering Controls for Major Asbestos Removal, Renovations, and Demolition Operations.

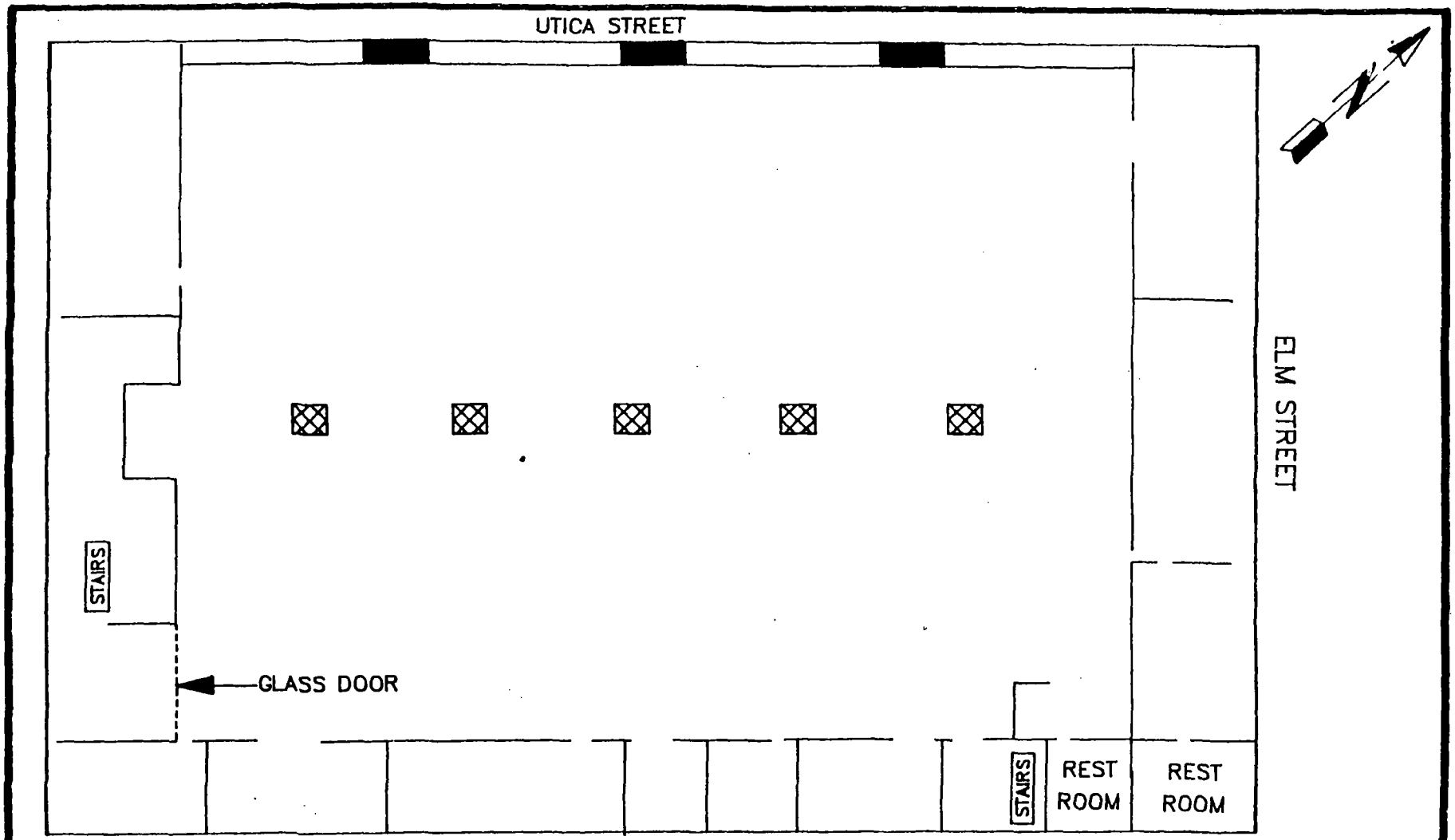
After the encapsulant was allowed to dry for a minimum of 2 hours, clearance samples were collected and analyzed to verify that levels of asbestos in the area were consistent with AHERA standards for human



LEGEND	FIGURE 7	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY		
LOADING DOCK	MAIN FLOOR ASBESTOS ABATEMENT AREAS TOLEDO PLATE GLASS SITE TOLEDO, LUCAS COUNTY, OHIO NOT DRAWN TO SCALE	DRAWN BY P. LIU	DATE 11/04/92	PAN# EOH0959FBA
TANK		APPROVED BY A.A.BUSHER	DATE 11/04/92	TDD # T05-9210-024
ELECTRICAL SYSTEM				
CHAIN-LINK FENCE				



LEGEND	FIGURE 8	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
BOILER	BASEMENT SKETCH TOLEDO PLATE GLASS SITE TOLEDO, LUCAS COUNTY, OHIO NOT DRAWN TO SCALE	DRAWN BY P. LIU | DATE 11/04/92 | PAN# EOH0959FBA APPROVED BY A.A.BUSHER | DATE 11/04/92 | TDD # T05-9210-024
WOOD PLANK RAILING		



LEGEND	FIGURE 9	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY		
⊠ PILLARS	SECOND FLOOR SKETCH TOLEDO PLATE GLASS SITE TOLEDO, LUCAS COUNTY, OHIO	DRAWN BY P. LIU	DATE 11 – 04 – 92	PAN# EOH0959FBA
■ HEAT REGISTERS	NOT DRAWN TO SCALE	APPROVED BY A.A.BUSHER	DATE 11 – 04 –92	TDD # T05–9210–024

health and safety. The collection of air samples and analytical techniques are discussed in more detail in section 1.5.4.3.

1.5.4.4.1 Cleanup Activities - Area 6

Area 6 (Figure 7) was the drum staging area during the Phase I cleanup activities. To prepare the area for drum staging, the area had already been the subject of preliminary asbestos abatement work which occurred in Phase I. At that time, most of the visible debris, asbestos, and ACM was cleaned up and disposed of. As such, minimal time was required to prepare this area for the completion of the remainder of abatement activities.

The ERCS began prep work in Area 6 on September 9, 1992. At this time, visqueen barriers were applied to the walls. The ERCS completed prep work and immediately proceeded with abatement activities on September 10, 1992. Abatement activities were completed on September 14, 1992.

Clearance samples were collected on September 15, 1992. These samples failed to pass clearance because the concentration of asbestos in the air was determined to be higher than the AHERA clearance standard of 70 structures/mm^2. The ERCS resumed cleanup activities and on September 28, 1992, additional clearance samples were collected. The analytical results for the clearance samples collected on September 28, 1992, indicated that levels of asbestos in Area 6 met the AHERA standards for clearance. Based on these results, on October 1, 1992, the OSC decided that the levels of asbestos in Area 6 were less than concentrations injurious to human health, and that cleanup of this area was complete.

1.5.4.4.2 Cleanup Activities - Areas 4 and 5

The ERCS began prep work in Areas 4 and 5 (Figure 7) on September 15, 1992. In addition to the debris disposed of in asbestos bags, the ERCS cleared mirror glass from the Phase 5 area. The ERCS used shovels to consolidate the glass into a central area and place it in double-lined cardboard boxes for disposal as ACM.

On September 17, 1992, the ERCS initiated abatement activities in Areas 4 and 5 of the TPWG building. The removal of asbestos from Areas 4 and 5 was completed on September 21, 1992. The ERCS began pressure washing in the area on September 22, 1992. All abatement activities and pressure washing was completed by September 28, 1992. Encapsulation of both areas was completed on September 29, 1992. The TAT collected TEM samples for Areas 4 and 5 and shipped them to Hayden Laboratories for analysis on September 29, 1992. Analytical results received on October 1, 1992, indicated a level of asbestos less than the AHERA standard for clearance and clearance was achieved.

1.5.4.4.3 Cleanup Activities - Area 3

The ERCS performed prep work on Area 3 (Figure 7) on September 15, 16, and 23, 1992. The ERCS crew prepared Area 3 by placing debris and cardboard on wood pallets and wrapping the material with visqueen. The removal of floor tile was included in the prep work for Area 3. Materials stacked on wood pallets and wrapped in visqueen were left in place for later encapsulation and removal for disposal. Loose debris and floor tile were placed into asbestos bags for disposal as ACM and moved to the bag-out area.

Abatement activities in Area 3 occurred over a 2-day period. On October 6, 1992, the ERCS began removing pipe insulation from Area 3. The crew conducted work on scaffolding and on a man-lift to remove the pipe insulation from overhead areas. On October 7, the crew began pressure washing the east side of Area 3 while continuing to conduct abatement activities in the office area at the west end of the work area. The ERCS completed pressure washing of the entire area and began applying encapsulant to the area on October 9, 1992. Encapsulation was completed on October 10, 1992. The TAT collected PCM and TEM samples for clearance on October 10, 1992. The resulting samples provided conflicting analytical results. A second TEM clearance sample was collected on October 15, 1992. Analytical results received on October 16, 1992, indicated that levels of asbestos in the ambient air were less than the required AHERA levels, and clearance was achieved.

1.5.4.4.4 Cleanup Activities - Areas 1 and 2

Prep work in Areas 1 and 2 of the TPWG building (Figure 7) began on October 9, 1992. ERCS crews collected debris in both areas, placing debris in asbestos bags for later disposal as ACM. After the removal of debris, crews proceeded with abatement activities in both areas, beginning on October 12, 1992. Pipe insulation was removed from Area 1 and floor tile from Area 2. Pressure washing was initiated in both areas on October 13, 1992. Removal of all contaminants from both areas was completed by October 14, 1992. On October 15, 1992, the ERCS completed all pressure washing in Areas 1 and 2, and the TAT completed all visual inspections for these areas. On October 16, 1992, the ERCS applied encapsulant and the TAT collected TEM clearance samples for both areas. The TAT received verbal analytical results for the collected samples on October 17, 1992, and determined that the air samples met the AHERA standards for clearance.

1.5.4.4.5 Cleanup Activities - Basement

On September 17, 1992, the TAT conducted air monitoring of the basement of the TPWG facility using a CGI/O_2. Air monitoring indicated no levels above background in the basement.

The ERCS crew began prep work of the basement on September 30, 1992 (Figure 8). All windows in the basement were cleaned and sealed with visqueen and duct tape. Small pieces of loose debris were collected and

placed in asbestos bags. The accumulated bags were moved from the basement to the bag-out area on the main floor of the TPWG building for transportation and disposal. Larger pieces of debris were stacked on wood pallets and wrapped in visqueen. The accumulated pallets were removed from the basement on October 20 and 21, 1992.

The OSC directed the ERCS to conduct abatement activities in the basement of the TPWG building in three parts; the single boiler in the southeast corner of the basement, the boiler room in the northwest portion of the basement, and the main floor of the basement (Figure 8). The boiler and the boiler room were cleaned of asbestos first because these areas were easily segregated from the main floor.

Prior to the initiation of abatement activities, the OSC directed the ERCS to seal off all stairwells leading to the basement except the one stairwell leading into cleanup Area 2 (Figure 7). By having the remaining stairwells sealed off, the OSC eliminated the possibility of contamination of areas already cleaned of asbestos and cleared.

The ERCS began abatement activities in the basement on October 9, 1992, building a containment structure around the boiler in the southeast corner of the basement. A negative air pressure machine was attached to the structure and poly sheeting was placed over the floor of the structure. The cleaning of this boiler was completed on October 10, 1992.

The ERCS proceeded to the boiler room in the northwest portion of the basement on October 10, 1992, and the main floor of the basement on October 12, 1992.

Abatement activities in the basement were completed on October 13, 1992. ERCS crews pressure washed the basement on October 14 and 15, 1992. Encapsulant was also applied on October 15, 1992. The TAT collected TEM clearance samples for the basement on October 16, 1992. The TAT received verbal analytical results for these samples on October 17, 1992, and determined that the air samples met the AHERA criteria for clearance.

1.5.4.4.6 Cleanup Activities - Second Floor

The ERCS conducted prep work on the second floor on September 16 and 30, and on October 1, 1992 (Figure 9). Carpeting in the central area of the second floor was removed prior to the clearing of asbestos and/or ACM from the second floor. During its removal, the carpet was continuously sprayed with amended water to reduce the emission of asbestos fibers into the air. The carpet was wrapped in visqueen and disposed of along with other ACM in a rolloff box for later transportation and disposal. After the carpet was removed, the ERCS lined the walls with visqueen. This barrier, extending 4 feet up the wall from the floor, was installed to contain ACM released during abatement activities.

Following the removal of the carpet and other prep work, the ERCS used floor scrapers to remove asbestos-containing tile from three of the perimeter offices. All surfaces were continually sprayed with amended water during the removal. Finally, substrate was wet cleaned after the removal of the tile to ensure that as much of the asbestos as possible was removed prior to encapsulation. Removal of the tiles began on October 2, 1992, and concluded on October 5, 1992.

On October 5, 1992, the TAT and the ERCS foreman conducted a final visual inspection of the second floor and encapsulant was applied. The TAT also collected TEM clearance samples for the second floor on October 5, 1992. Clearance for the second floor was achieved on October 7, 1992.

1.5.4.5 Removal Of Additional Chemical Wastes

On September 22, 1992, site personnel discovered 16 small containers of solids and liquids in the TPWG building. A total of five 1-gallon cans labelled as solvents or glossing compounds, and eleven 1-pound cans labelled as inks or bronzing compounds were identified. In addition, on October 7, 1992, site personnel discovered 12 plastic bottles labelled septic tank deodorizer in the building. After being notified of the containers and the suspected contents, OSC El-Zein directed the ERCS to make arrangements for the removal and disposal of the materials.

On October 22, 1992, the TAT conducted hazard categorization tests on the materials. Based on the test results, the materials were grouped into four categories - solids, flammable solids, flammable liquids, and compressed gas. The ERCS consolidated the containers into two 30-gallon drums and two 5-gallon pails for later disposal.

1.5.4.6 Phase II Demobilization

A gradual reduction in number of site personnel began on October 15, 1992.

By October 19, 1992, the site complement had been reduced to the OSC, the TAT, and the ERCS response manager, clerk, transportation and disposal coordinator, and a five-man cleanup crew. On October 22, 1992, all ERCS personnel except the clerk were demobed, and demobilization of site equipment began. On October 23, 1992, all remaining site equipment and the TAT were demobilized. Site security was maintained until October 26, 1992, when four containers of labpack waste were transported from site for disposal.

1.5.5 Other Miscellaneous Tasks

Prior to beginning the removal action, the designated hot zone was posted with U.S. EPA "No Trespassing" and other warning signs. Signs were also posted at all potential points of access to the building and at approximately 50-foot intervals around the building. As previously noted, the building was also secured against trespassers. Both ends of

Utica Street, the points of entry to the support zone, were barricaded and posted with warning signs.

A vacant lot immediately to the southwest of the support zone was littered with trash, debris, and discarded tires. The U.S. EPA worked with the City of Toledo to arrange for this lot to be cleaned up. A city subcontractor removed the debris on May 8, 1992.

1.5.6 Transportation and Disposal of Wastes

On May 13, 1992, 6 cubic yards of non-hazardous, non-regulated glass and debris cleared from beneath the loading docks of the TPWG building were transported from site for disposal. Ace disposal transported the material to a municipal landfill.

A single rolloff box containing 26 cubic yards of asbestos pipe insulation - R.Q. Hazardous Substance: Solid n.o.s. (asbestos), ORM-E, NA9188 - cleared from the TPWG facility was transported from site on May 26, 1992, by Consolidated Environmental Services. The insulation, contained in 148 double bags, was taken to Waste Management, Evergreen R & D, Northwood, Ohio, for landfill disposal.

Dart Trucking transported a total of three rolloff boxes containing 34 cubic yards of non-hazardous, non-regulated material (RCRA-empty drums and assorted containers, debris and granular solids) off site for disposal to the Envirosafe Services landfill in Oregon, Ohio. The first rolloff box left site on May 27, 1992. The last box left on July 17, 1992.

On July 17, 1992, 2,200 gallons of R.Q. waste paint related material (D001, D005, D008, D033, D036, D038, D040, D042), flammable liquid NA1263, were transported off site for disposal. The waste paint was transported by Dart Trucking to Clark Processing, Inc., Dayton, Ohio for fuel blending.

On July 20, 1992, 175 gallons of R.Q. waste acid liquid n.o.s. (D002, NA1760), 310 gallons of R.Q. waste alkaline (corrosive) liquid (D002, NA1719), and 125 gallons of high pH special waste (R.Q. waste alkaline (corrosive) liquid n.o.s. D002, NA1719) was transported by Dynecol to their facility in Detroit, Michigan, for treatment by neutralization.

A total of five 40-cubic yard rolloff boxes containing bagged R.Q. hazardous substance: solid n.o.s. (asbestos), ORM-E, NA9188 were transported from site by BFI to their landfill in Erie, Michigan. The dates of removal and the number of bags removed are as follows: September 23, 1992, 262 bags; October 1, 1992, 269 bags; October 12, 1992, 478 bags; October 13, 1992, 400 bags; and October 23, 1992, 508 bags.

From October 15 to October 21, 1992, BFI and Waste Management transported R.Q. hazardous substance: solid n.o.s. (asbestos), ORM-E, NA9188 from site for disposal. BFI transported twelve 30-cubic-yard

rolloff boxes containing ACM to their landfill in Erie, Michigan, from October 15 to October 20, 1992. Waste Management transported four 40-cubic-yard rolloff boxes containing ACM to the Evergreen R & D facility in Northwood, Ohio, for landfill disposal from October 20 to October 21, 1992.

From October 15 to October 22, 1992, BFI transported a total of 920 cubic yards of non-hazardous construction debris from the site to their Erie, Michigan, landfill for disposal. The debris was removed from site in twenty-four 30-cubic-yard and five 40-cubic-yard rolloff boxes.

On October 26, 1992, Chem Freight transported approximately 100 pounds of labpack materials from site to Drug & Laboratory Disposal in Plainwell, Michigan, for treatment. The labpack material was comprised of waste from the following categories: solids; flammable solids; flammable liquids and compressed gas.

The preceding information is summarized in the waste disposal summary which appears as Table 1. All off-site disposal facilities were in compliance with the U.S. EPA off-site policy at the time of transportation and/or disposal of the wastes. All actions taken were consistent with the National Contingency Plan.

1.5.7 Post-Cleanup Meeting

1.6 Public Information/Community Relations

The site is located in the midst of an industrial/commercial/residential area and has been a subject of concern to local citizens for some time. Residents seemed pleased that the environmental threat was being addressed and the community was extremely cooperative. News coverage of the removal action was sparse; only the area newspaper, a local radio station, and a local television station expressed interest in activities. Throughout the removal, OSCs El-Zein and Dollhopf maintained a positive rapport with both State and local agencies, as well as the community and the press.

1.7 Cost Summary

ITEP was the primary ERCS contractor under Delivery Order #7460-05-226; all on-site activities were performed by ITEP and their subcontractors. Major site activities commenced on May 4, 1992, and final off-site waste disposal was completed on October 26, 1992. Daily expenditures for services provided by ITEP totaled $558,281.60. A breakdown of contractor expenditures into major categories of labor, equipment, and materials is shown in Table 2. In addition, recoverable costs were also expended by the U.S. EPA and the TAT (TDD #T05-9210-024).

Any indication of specific costs incurred at the site is only an approximation, subject to audit and final definitization by the U.S. EPA. The OSC Report is not meant to be final reconciliation of the costs associated with a particular site.

TABLE 1
WASTE DISPOSAL SUMMARY
TOLEDO PLATE & WINDOW GLASS
(PAGE 1 OF 10)

DATE SHIPPED	WASTE CATEGORY	QUANTITY	TRANSPORTER	DISPOSAL FACILITY	DISPOSAL METHOD	MANIFEST/ DOCUMENT
5/13/92	NON-HAZARDOUS, NON-REGULATED, GLASS/DEBRIS	6 CUBIC YD.	ACE DISPOSAL	MUNICIPAL LANDFILL	LANDFILL	N/A
5/26/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS) ORM-E, NA-9188	26 CUBIC YD. (148 BAGS)	CONSOLIDATED ENVIRONMENTAL SERVICES	WASTE MANAGEMENT, EVERGREEN R & D, NORTHWOOD, OHIO	LANDFILL	N/A
5/27/92	NON-HAZARDOUS, NON-REGULATED MATERIAL (RCRA EMPTY DRUMS)	18 CUBIC YD.	DART TRUCKING	ENVIROSAFE SERVICES OF OHIO, OREGON, OHIO	LANDFILL	00001
5/27/92	NON-HAZARDOUS, NON-REGULATED MATERIAL (RCRA EMPTY DRUMS)	8 CUBIC YD.	DART TRUCKING	ENVIROSAFE SERVICES OF OHIO, OREGON, OHIO	LANDFILL	00002
7/17/92	NON-HAZARDOUS, NON-REGULATED MATERIAL (DEBRIS, EMPTY DRUMS, GRANULAR SOLIDS)	8 CUBIC YD.	DART TRUCKING	ENVIROSAFE SERVICES OF OHIO, OREGON, OHIO	LANDFILL	00003
7/17/92	R.Q. WASTE PAINT RELATED MATERIAL (D001,D005,D008,D033, D036,D038,D040,D042), FLAMMABLE LIQUID, NA1263	43 DRUMS (2200 GALS)	DART TRUCKING	CLARK PROCESSING, INC. DAYTON, OHIO	FUEL BLENDING	N/A
7/20/92	R.Q. WASTE ACID LIQUID N.O.S. (D002), CORROSIVE MATERIAL, NA 1760	5 DRUMS (175 GALS)	DYNECOL	DYNECOL, INC. DETROIT, MICHIGAN	NEUTRALIZATION	MI2791198

TABLE 1
WASTE DISPOSAL SUMMARY
TOLEDO PLATE & WINDOW GLASS
(PAGE 2 OF 10)

DATE SHIPPED	WASTE CATEGORY	QUANTITY	TRANSPORTER	DISPOSAL FACILITY	DISPOSAL METHOD	MANIFEST/ DOCUMENT
7/20/92	R.Q. WASTE ALKALINE (CORROSIVE) LIQUID N.O.S. (D002), CORROSIVE MATERIAL, NA1719	10 DRUMS (310 GALS)	DYNECOL	DYNECOL, INC. DETROIT, MICHIGAN	NEUTRALIZATION	MI2791198
7/20/92	R.Q. WASTE ALKALINE (CORROSIVE) LIQUID N.O.S. (D002), CORROSIVE MATERIAL, NA1719, [SPECIAL WASTE - HIGH PH]	3 DRUMS (125 GALS)	DYNECOL	DYNECOL, INC. DETROIT, MICHIGAN	NEUTRALIZATION	MI1756200
9/23/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	40 CUBIC YD. (262 BAGS)	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025700
10/1/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	40 CUBIC YD. (269 BAGS)	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025614
10/12/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	40 CUBIC YD. (478 BAGS)	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025601
10/13/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	40 CUBIC YD. (400 BAGS)	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025610
10/15/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025330

TABLE 1
WASTE DISPOSAL SUMMARY
TOLEDO PLATE & WINDOW GLASS
(PAGE 3 OF 10)

DATE SHIPPED	WASTE CATEGORY	QUANTITY	TRANSPORTER	DISPOSAL FACILITY	DISPOSAL METHOD	MANIFEST/ DOCUMENT
10/15/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	30 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025333
10/15/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	30 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025332
10/15/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 100–446
10/16/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 101–446
10/16/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 102–446
10/16/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 103–411
10/16/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 104–411

TABLE 1
WASTE DISPOSAL SUMMARY
TOLEDO PLATE & WINDOW GLASS
(PAGE 4 OF 10)

DATE SHIPPED	WASTE CATEGORY	QUANTITY	TRANSPORTER	DISPOSAL FACILITY	DISPOSAL METHOD	MANIFEST/ DOCUMENT
10/16/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 105-446
10/16/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 106-446
10/16/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 107-411
10/16/92	WASTE FLAMMABLE LIQUID, N.O.S. (TOLUENE, 1,2-DICHLOROBENZENE) FLAMMABLE LIQUID, UN1993, D001, U070 [LABPACK MATERIAL]**	1 DRUM (80 LBS)	CHEM FREIGHT	POLLUTION CONTROL INDUSTRIES, EAST CHICAGO, INDIANA	**REJECTED**	INA0584439
10/16/92	NON-HAZARDOUS, NON-REGULATED, SOLID WASTE [LABPACK MATERIAL]**	1 DRUM (80 LBS)	CHEM FREIGHT	POLLUTION CONTROL INDUSTRIES, EAST CHICAGO, INDIANA	**REJECTED**	INA0584439
10/16/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 108-446

** Pollution Control Industries of Indiana rejected these materials on 10/20/92. The waste was returned to site on 10/22/92. After hazard categorization testing was conducted, the waste was repackaged and transported to Drug & Laboratory Disposal, Plainwell, Michigan. The waste was shipped to Drug and Laboratory Disposal on 10/26/92.

TABLE 1
WASTE DISPOSAL SUMMARY
TOLEDO PLATE & WINDOW GLASS
(PAGE 5 OF 10)

DATE SHIPPED	WASTE CATEGORY	QUANTITY	TRANSPORTER	DISPOSAL FACILITY	DISPOSAL METHOD	MANIFEST/ DOCUMENT
10/16/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 109-411
10/19/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025323
10/19/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025324
10/19/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025325
10/19/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025326
10/19/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 110-404
10/19/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 111-446

TABLE 1
WASTE DISPOSAL SUMMARY
TOLEDO PLATE & WINDOW GLASS
(PAGE 6 OF 10)

DATE SHIPPED	WASTE CATEGORY	QUANTITY	TRANSPORTER	DISPOSAL FACILITY	DISPOSAL METHOD	MANIFEST/ DOCUMENT
10/19/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 112-404
10/19/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 113-446
10/19/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188 **	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	**REJECTED**	025327
10/20/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 114-446
10/20/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 115-446
10/20/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 116-446
10/20/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 117-411

** rejected by BFI on 10/19/92 because their landfill had closed for the day.
This load was transported on 10/20/92 under the same manifest issued for it on 10/19/92.

TABLE 1
WASTE DISPOSAL SUMMARY
TOLEDO PLATE & WINDOW GLASS
(PAGE 7 OF 10)

DATE SHIPPED	WASTE CATEGORY	QUANTITY	TRANSPORTER	DISPOSAL FACILITY	DISPOSAL METHOD	MANIFEST/ DOCUMENT
10/20/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 118-446
10/20/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 119-411
10/20/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188 **	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025327
10/20/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025328
10/20/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025329
10/20/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025362
10/20/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025361

**This is the load of asbestos and ACM rejected by BFI on 10/19/92 because their landfill had closed for the day.

TABLE 1
WASTE DISPOSAL SUMMARY
TOLEDO PLATE & WINDOW GLASS
(PAGE 8 OF 10)

DATE SHIPPED	WASTE CATEGORY	QUANTITY	TRANSPORTER	DISPOSAL FACILITY	DISPOSAL METHOD	MANIFEST/ DOCUMENT
10/20/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	40 CUBIC YD.	WASTE MANAGEMENT	WASTE MANAGEMENT EVERGREEN R & D NORTHWOOD, OHIO	LANDFILL	N/A
10/20/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	40 CUBIC YD.	WASTE MANAGEMENT	WASTE MANAGEMENT EVERGREEN R & D NORTHWOOD, OHIO	LANDFILL	N/A
10/21/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	40 CUBIC YD.	WASTE MANAGEMENT	WASTE MANAGEMENT EVERGREEN R & D NORTHWOOD, OHIO	LANDFILL	N/A
10/21/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	40 CUBIC YD.	WASTE MANAGEMENT	WASTE MANAGEMENT EVERGREEN R & D NORTHWOOD, OHIO	LANDFILL	N/A
10/21/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 120-446
10/21/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN.	LANDFILL	BILL OF LADING 121-446
10/21/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI - VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 122-446

TABLE 1
WASTE DISPOSAL SUMMARY
TOLEDO PLATE & WINDOW GLASS
(PAGE 9 OF 10)

DATE SHIPPED	WASTE CATEGORY	QUANTITY	TRANSPORTER	DISPOSAL FACILITY	DISPOSAL METHOD	MANIFEST/ DOCUMENT
10/21/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	30 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 123-446
10/22/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	40 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 124-446
10/22/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	40 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 125-406
10/22/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	40 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 126-446
10/22/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	40 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 127-446
10/22/92	NON-HAZARDOUS CONSTRUCTION DEBRIS	40 CUBIC YD.	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	BILL OF LADING 128-446
10/23/92	R.Q. HAZARDOUS SUBSTANCE: SOLID N.O.S. (ASBESTOS), ORM-E, NA-9188	40 CUBIC YD. (508 BAGS)	BFI	BFI – VIENNA JUNCTION, ERIE, MICHIGAN	LANDFILL	025359

TABLE 1
WASTE DISPOSAL SUMMARY
TOLEDO PLATE & WINDOW GLASS
(PAGE 10 OF 10)

DATE SHIPPED	WASTE CATEGORY	QUANTITY	TRANSPORTER	DISPOSAL FACILITY	DISPOSAL METHOD	MANIFEST/ DOCUMENT
10/26/92	LABPACK MATERIAL *	2 DRUMS 2 PAILS (100 LBS **)	CHEM FREIGHT	DRUG & LABORATORY DISPOSAL, PLAINWELL, MICHIGAN	TREATMENT	MI2545682

* Solids, Flammable Liquids, Flammable Solids, Compressed Gas. This material was originally transported from site on 10/16/92 for disposal at Pollution Control Industries (PCI) of Indiana under manifest INA0584439. The material was rejected by PCI on 10/20/92 and returned to site on 10/22/92.

** Approximate weight

TABLE 2
SUMMARY OF TOTAL ESTIMATED REMOVAL COSTS
Toledo Plate and Window Glass Site
May 4, 1992, through October 26, 1992

EXTRAMURAL COSTS:		
ERCS Contractor - ITEP		$ 466,088.64
Labor/Travel/Subsistence		$ 292,740.60
Equipment		$ 13,868.04
Materials		$ 31,666.48
Subcontractors		$ 127,813.52*
TAT Contractor (2)		$ 92,192.96
	Subtotal	$ 558,281.60
INTRAMURAL COSTS:		
U.S. EPA, OSC - Direct Costs		$ 16,383.00
Indirect Costs (3)		$ 28,339.40
	Subtotal	$ 44,722.40
ESTIMATED TOTAL PROJECT COSTS		$ 603,004.00
PROJECT CEILING		$1,329,500.00

(1) Source: ERCS Contractor 68-01-7460
Invoice #1226-3, 11/25/92 (Appendix 2-F), D.O. #7460-05-226.

(2) Source: IOL, 10/13/92 (Appendix 2-E), TDD #T05-9210-024.

(3) Source: IOL, 10/13/92 (Appendix 2-E).

*Includes Transportation and Disposal.

Any indication of specific costs incurred at the site is only an approximation, subject to audit and final definitization by the U.S. EPA. The OSC Report is not meant to be a final reconciliation of the costs associated with a particular site.

2.0 EFFECTIVENESS OF REMOVAL ACTIONS

2.1 The Potentially Responsible Parties

No actions were taken by the PRPs. Refer to Section 1.4.

2.2 State and Local Agencies

As discussed in Section 1.2, the OEPA performed several site investigations of the TPWG property in 1991 in response to the report of abandoned drums. In April of 1992, the OEPA requested assistance from the U.S. EPA in addressing the environmental threat posed by the site. An investigation by the U.S. EPA lead to the subsequent removal action. State agencies were cooperative with the U.S. EPA throughout the entire removal action.

Local agencies were instrumental throughout the entire removal action. Agencies of particular note are the Toledo Fire Department and the Toledo Pollution Control Board. These agencies were of particular assistance during the setup periods for both the first and second phases of the removal, providing timely setup of street barricades, installation of water meters, and timely analyses of the basement flood waters.

2.3 Federal Agencies and Special Teams

The U.S. EPA provided all monetary resources for the removal at the TPWG site. Under the direct guidance of OSC Jason El-Zein, the drums and containers were assessed for compatibility, sampled, consolidated, packed, and shipped for disposal, and the ACM was removed or stabilized as discussed in Section 1.5.

2.4 Contractors, Private Groups, and Volunteers

The contractor, ITEP, worked efficiently and was cost conscious throughout the first phase of the removal action - the removal of chemical wastes. However, during the second phase of the removal, the abatement of asbestos, the contractor could have been more conscientious in the areas of health and safety, personnel management, and time management. Several changes in site personnel and management, and health and safety issues were major factors in the delays impacting the timely completion of the asbestos abatement and overall completion of the removal action.

The Technical Assistance Team (TAT) was both efficient and cost conscious throughout both phases of the removal. They responded in a timely manner to requests for special equipment and additional personnel and were diligent in their collection and maintenance of site documentation.

3.0 DIFFICULTIES ENCOUNTERED

Maintaining adequate light in which to conduct work was more difficult during Phase II activities than during the Phase I activities. All windows, doors, and potential access routes were boarded over with plywood at the conclusion of the Phase I activities to deter vandalism and preclude access to the interior of the TPWG building. All plywood, except for that barring a single doorway on the northwest side of the building, remained intact during the removal of asbestos. This effectively prevented most natural light from entering the building. During Phase II activities, 11 light stands were employed and moved as necessary throughout the building to provide site personnel with adequate light for cleanup activities, inspections, and air sampling activities.

Maintaining adequate electric power to the site was also a problem during Phase II activities. The running of heaters in all trailers, the operation of as many as eight negative air pressure machines at one time, and the constant use of sprayers overloaded site circuit breakers on several occasions. The ERCS subcontractor designated to maintain site electricity was on site several times during Phase II activities to install larger circuit breakers and assist in the repair of damaged power lines. No significant delays were incurred as a result of power failures.

3.1 Weather Conditions

The removal action at the TPWG site was initiated during the late spring and temperatures were often extreme. High temperatures and high humidity created many operational difficulties and health and safety concerns for personnel. Extra break periods were necessary to guard work crews against heat stress injury. The asbestos abatement phase of the removal began in the early autumn. Towards the end of this phase, temperatures fell sharply and were accompanied by steady wind and a brief period of snow. At this time, the crew was loading debris from the loading docks and were not afforded a substantial amount of protection from the elements. Steps were taken with the crew to minimize heat loss and decrease the potential for cold stress.

3.2 Building Configuration

During the first phase of the removal, drums and containers were scattered throughout the basement and ground floor of the 120,000-square-foot TPWG building. The size of the building and the difficulty in bringing heavy drums up the narrow existing stairways caused operational difficulties. Work was occasionally slowed so that these tasks might be accomplished with greater safety.

The size of the building and the need for level B or C protection to be worn at all times also created communication difficulties. To alleviate this problem, radios were carried by all work crews. This allowed the RM and the OSC to remain in constant contact with the field personnel.

During the second phase of the removal, the extreme size of the building presented logistical problems for the creation and maintenance of negative air pressure while abatement activities took place. It was necessary to designate eight separate cleanup areas within the building and address each area as an isolated containment zone.

3.3 Safety

During the first phase of the removal, the size and condition of the building and weather conditions encountered created a number of unique safety concerns. During the second phase of the removal, these concerns, as well as the constant presence of water on the floors, the need to elevate workers above the floor to reach asbestos and ACM in the building's ceiling, and the frequently unavoidable positioning of electric power cords across wet surfaces and through standing water were safety issues. To overcome these difficulties, a great degree of coordination was necessary between the OSC, TAT, RM, and crew to conduct detailed, daily safety meetings, establish daily work zones, and maintain constant communication.

4.0 OSC RECOMMENDATIONS

Due to U.S. EPA institutional policy regarding lender liability, the Region did not issue an Administrative Order to the bank ("The Lender"), even when it was possible that the liquidation of machinery by the bank may have contributed to the severe asbestos problem on site. Since the building is clean and free of asbestos and other hazardous materials, the bank stands to profit from its lease or sale. OSC recommends that U.S. EPA place a lien on the property in order to recover some of the removal costs.

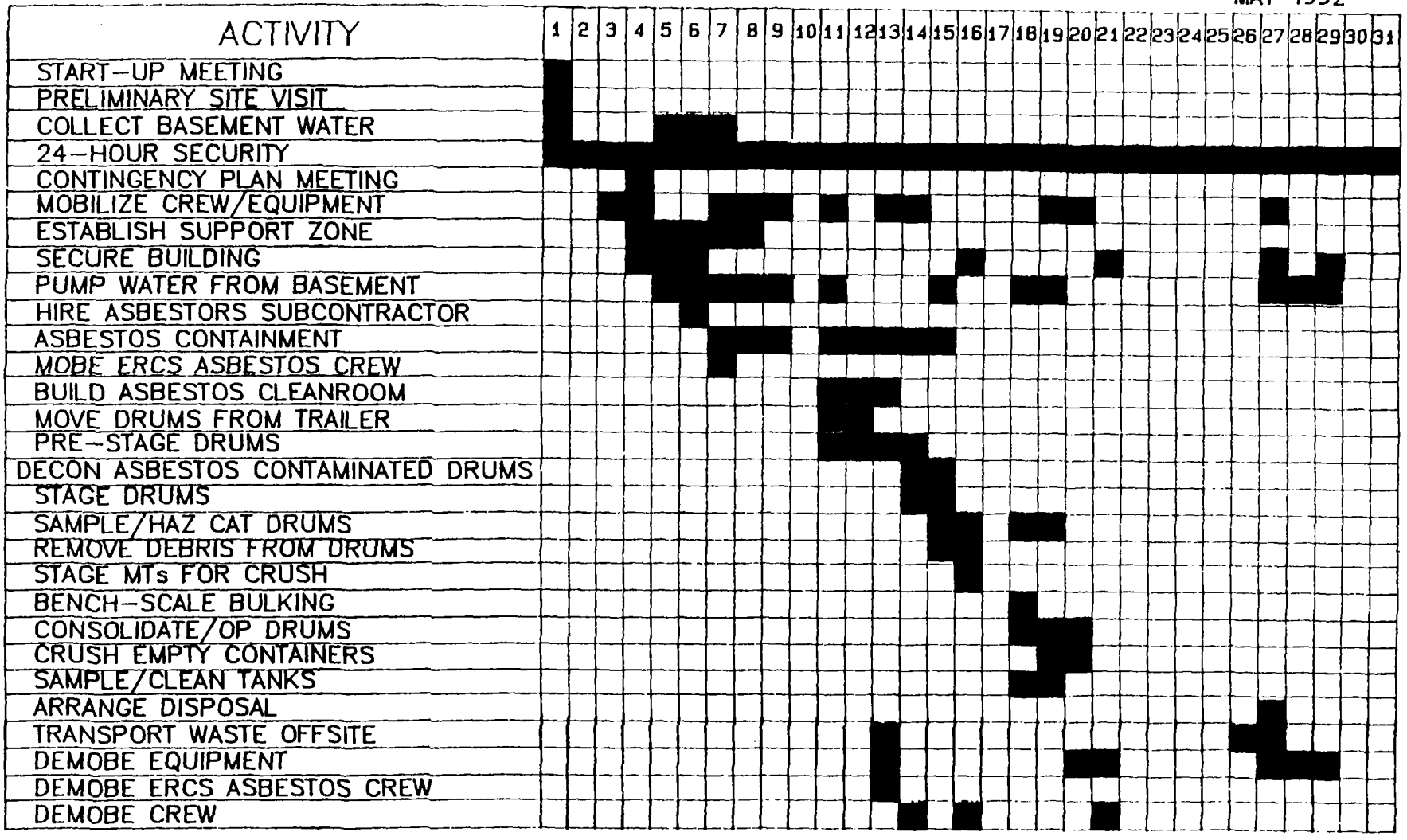
ATTACHMENT A

SITE ACTIVITY LOG

PHASE I ACTIVITY LOG

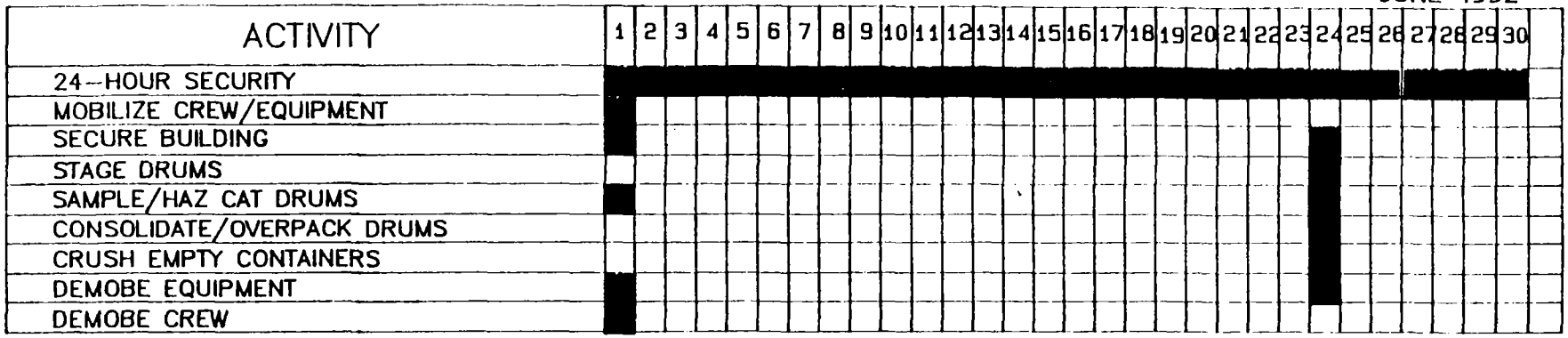
TOLEDO PLATE GLASS SITE

MAY 1992



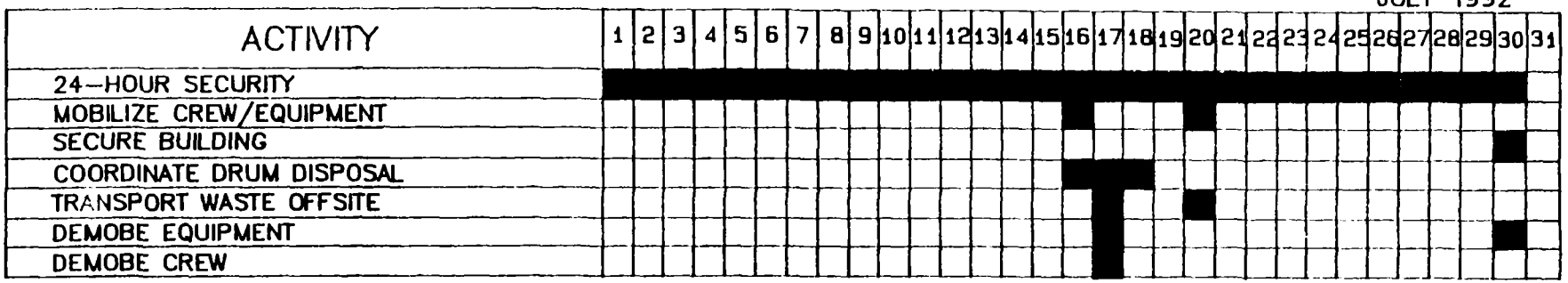
PHASE I ACTIVITY LOG
TOLEDO PLATE GLASS SITE

JUNE 1992



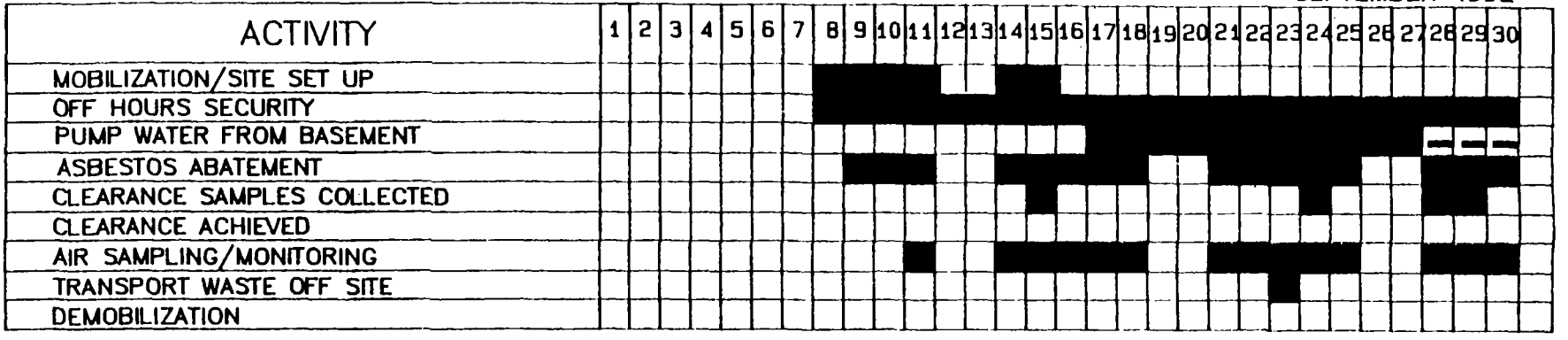
PHASE I ACTIVITY LOG
TOLEDO PLATE GLASS SITE

JULY 1992



PHASE II ACTIVITY LOG
TOLEDO PLATE GLASS SITE

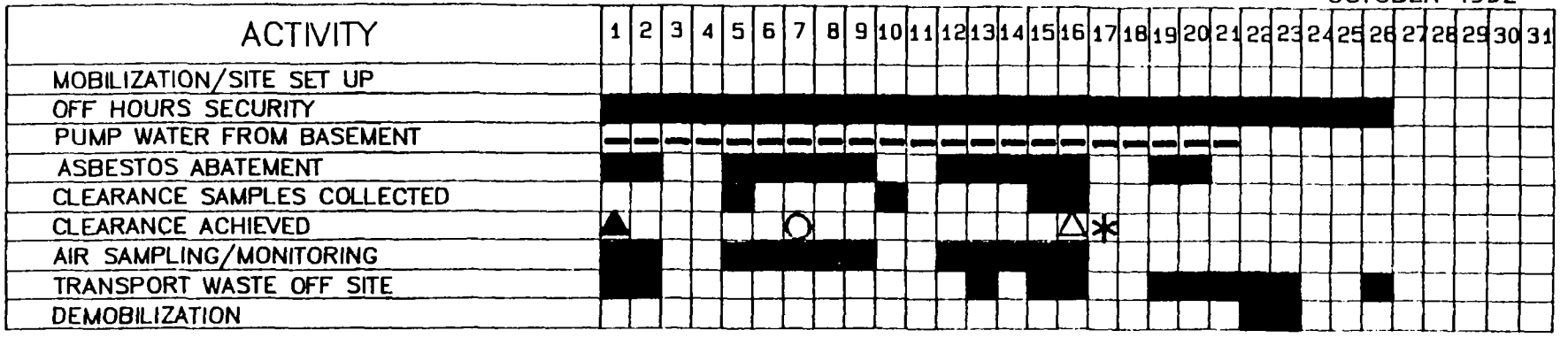
SEPTEMBER 1992



▬ DAYTIME ONLY

PHASE II ACTIVITY LOG
TOLEDO PLATE GLASS SITE

OCTOBER 1992



▲ CLEARANCE ACHIEVED – AREAS 4, 5, AND 6

△ CLEARANCE ACHIEVED – AREAS 3

○ CLEARANCE ACHIEVED – SECOND FLOOR

✱ CLEARANCE ACHIEVED – BASEMENT AND AREAS 1 & 2

– DAYTIME ONLY

ATTACHMENT B

DRUM LOG

MASTER DRUM LOG
TOLEDO PLATE AND WINDOW GLASS

WASTE STREAM	DRUM #	% FULL	DRUM TYPE	CONTENTS DESCRIPTION	LABELS/MARKINGS	HAZ CAT RESULTS	DISPOSAL
solvent/paint	0001	100	steel 55	grey liq./sludge	S/B Mirror Backing	Flammable/Combust.	
solvent/paint	0002	100	steel 55	grey liq./sludge	S/B Mirror Backing	Flammable/Combust.	
solvent/paint	0003	100	steel 55	Green liq. w/ Black sludge	S/B Mirror Backing	pH 14	
solvent/paint	0004	100	steel 55	grey liq./sludge	S/B Mirror Backing	Flammable/Combust.	
solvent/paint	0005	100	steel 55	Green liq. w/ Black sludge	S/B Mirror Backing	pH 14	
solvent/paint	0006	100	steel 55	grey liq./sludge	S/B Mirror Backing	Flammable/Combust.	
solvent/paint	0007	100	steel 55	grey liq./sludge	S/B Mirror Backing	Flammable/Combust.	
solvent/paint	0008	100	steel 55	grey liq./sludge	S/B Mirror Backing	Flammable/Combust.	
solvent/paint	0009	100	steel 55	yellow liquid	FEN21-DURALUX	Flammable/Combust.	
solvent/paint	0010	100	steel 55	Grey liquid	FEN21-DURALUX	Flammable/Combust.	
solvent/paint	0011	100	steel 55	Grey liquid	FEN21-DURALUX	Flammable/Combust.	in #0016
solvent/paint	0012	100	steel 55	Grey liquid	FEN21-DURALUX	Flammable/Combust.	
solvent/paint	0013	50	steel 55	Grey liquid	FEN21-DURALUX	Flammable/Combust.	
solvent/paint	0014	100	steel 55	Black liquid	FEN21-DURALUX	Flammable/Combust.	
solvent/paint	0015	100	steel 55	Grey liquid	Lead-based paint	Flammable/Combust.	
solvent/paint	0016	25	steel 55	Black/grey solid	Mirror Backing	Flammable/Combust.	
solvent/paint	0017	25	steel 55	Black/grey solid	Mirocron Co	Flammable/Combust.	
solvent/paint	0018	100	steel 55	Grey liquid/solid	New Generation Paint	Flammable/Combust.	
solvent/paint	0019	75	steel 55	Black liquid	Mirocron Co	Flammable/Combust.	
solvent/paint	0020	100	steel 55	Black liquid	Mirror Backing	Flammable/Combust.	
solvent/paint	0021	50	steel 55	Black liquid	Mirocron Co	Flammable/Combust.	
solvent/paint	0022	100	steel 55	Black liquid	Mirror Backing	Flammable/Combust.	
solvent/paint	0023	100	steel 55	Black liquid	Mirocron Co	Flammable/Combust.	
solvent/paint	0024	100	steel 55	Black liquid	Mirocron Co	Flammable/Combust.	
solvent/paint	0025	100	steel 55	Black liquid	Mirocron Co	Flammable/Combust.	
solvent/paint	0026	100	steel 55	Black liquid	Mirror Backing	Flammable/Combust.	
solvent/paint	0027	100	steel 55	Black liquid	Mirror Backing	Flammable/Combust.	
solvent/paint	0028	100	steel 55	Black liquid	Mirror Backing	Flammable/Combust.	
solvent/paint	0029	100	steel 55	Black liquid	Mirocron Co	Flammable/Combust.	
solvent/paint	0030	<25	steel 55	Black/grey solid	Mirocron Co	Flammable/Combust.	in #0016
solvent/paint	0031	100	steel 55	Black liquid	Mirocron Co	Flammable/Combust.	
solvent/paint	0032	100	steel 55	Black liquid	Mirror Backing	Flammable/Combust.	
solvent/paint	0033	25	steel 55	Black liquid	Mirocron Co	Flammable/Combust.	in #0016
solvent/paint	0034	100	steel 55	Black liquid	Mirocron Co	Flammable/Combust.	
solvent/paint	0035	<25	steel 55	Black liquid	SC Solvent 100	Flammable/Combust.	in #0016
solvent/paint	0036	50	steel 55	Black liquid	SC Solvent 100	Flammable/Combust.	
solvent/paint	0037	100	steel 55	Clear liquid	Xylene (xylol)	Flammable/Combust.	
solvent/paint	0038	50	steel 55	Clear liquid	Butyl Acetate	Flammable/Combust.	
solvent/paint	0039	100	steel 55	Clear liquid	VMER Solvent 100	Flammable/Combust.	
solvent/paint	0040	100	steel 55	Rust/sludge	Merkans	Flammable/Combust.	
solvent/paint	0041	<25	steel 55	Clear/rusty liquid	"Nalgene tank"	Flammable/Combust.	in #0016
solvent/paint	0042	25	steel 55	Clear/yellow liquid	No markings	Combustable/pH 13	
solvent/paint	0043	50	steel 55	Rusty liquid	No markings	Combustable	
solvent/paint	0044	100	steel 55	Clear liquid	Solvent 150	Flammable/Combust.	
solvent/paint	0045	100	steel 55	Rusty liq/grey sludge	Xylene	Flammable/Combust.	
solvent/paint	0046	25	steel 55	Clear/yellow liquid	Kerosene	Flammable/Combust.	in #0016
solvent/paint	0047	100	steel 55	Clear liquid	Butyl Acetate	Flammable/Combust.	

MASTER DRUM LOG
TOLEDO PLATE AND WINDOW GLASS

WASTE STREAM	DRUM #	% FULL	DRUM TYPE	CONTENTS DESCRIPTION	LABELS/MARKINGS	HAZ CAT RESULTS	DISPOSAL
solvent/paint	0048	100	steel 55	Grey liquid	VWR Solvent 100	Flammable/Combust.	
acidic liquid	0049	25	poly 55	Clear/yellow liquid	Hydrochloric Acid	pH 0	
acidic liquid	0050	100	poly 55	Clear/yellow liquid	Hydrochloric Acid	pH 0	
acidic liquid	0051	100	poly 55	Clear/yellow liquid	Hydrochloric Acid	pH 0	
acidic liquid	0052	100	poly 25	Clear liquid	Sulfuric acid	pH 0	
non-RCRA solids	0053	50	30 gal fiber	small pink beads	water treatment	all negative	
non-RCRA solids	0054	50	20 gal fiber	brown flakes	sodium hydroxice	all negative	into #070
non-RCRA solids	0055	50	fiber 55	small pink beads	water treatment	all negative	
non-RCRA solids	0056	25	30 gal steel	brown paste	grease	all negative	contains drum #218
non-RCRA solids	0057	25	steel 55	black solid/debris	none	all negative	
solvent/paint	0058	<25	steel 55	yellow liquid	paint-contains lead	Flammable/Combust.	in #0016
non-RCRA solids	0059	100	30 gal steel	white solid/powder	none	all negative	
non-RCRA solids	0060	100	30 gal steel	white solid/powder	none	pH 5	
non-RCRA solids	0061	100	55 gal fiber	white solid/powder	none	pH 5	
non-RCRA solids	0062	100	steel 55	white solid/powder	none	pH 5	
caustic solids	0063	50	steel 55	grey powder	none	pH 14	contains other cans
caustic solids	0064	25	steel 55	black granular	Caustic Soda	pH 14	
caustic solids	0065	50	steel 55	black granular	Caustic Soda	pH 14	
caustic solids	0066	50	steel 55	white/yellow granular	Caustic Soda	pH 14	
caustic solids	0067	50	steel 55	black granular	Caustic Soda	pH 14	
caustic solids	0068	25	steel 55	black granular	Caustic Soda	pH 14	
caustic solids	0069	100	steel 55	white solid/powder	none	all negative	
caustic solids	0070	100	steel 55	white solid/powder	none	pH 5	
caustic solids	0071	25	steel 55	black granular	Caustic Soda	pH 14	
caustic solids	0072	<25	steel 55	black granular	Caustic Soda	pH 14	
caustic solids	0073	<25	steel 55	black granular	Caustic Soda	pH 14	
caustic solids	0074	100	steel 55	black granular	Caustic Soda	pH 14	
non-RCRA solids	0075	100	20 gal fiber	white solid/powder	none	pH 5	
caustic solids	0076	50	steel 55	black granular	Caustic Soda	pH 14	
caustic solids	0077	25	steel 55	brown granular	Caustic Soda	pH 11	
solvent/paint	0078	25	steel 55	grey liquid	paint	Flammable/Combust.	in #0016
caustic solids	0079	50	30 gal fiber	White soild	Caustic Soda	pH 14	
special waste	0080	75	poly 30	Clear liquid	Oxygen remover-liq.	"All negative"	
alkaline liquid	0081	100	poly 55	Clear liquid	Caustic Soda	pH 14	
alkaline liquid	0082	25	poly 55	Clear liquid	Caustic Soda	pH 14	
alkaline liquid	0083	75	poly 55	Clear liquid	Caustic Soda	pH 14	
alkaline liquid	0084	50	poly 30	Dark brown liquid	Boiler aid	pH 14	
alkaline liquid	0085	100	poly 55	Clear liquid	Caustic Soda	pH 14	
alkaline liquid	0086	75	poly 30	Yellowish liquid	"no marking"	pH 14	
alkaline liquid	0087	25	poly 55	Clear liquid	Caustic Soda	pH 14	
alkaline liquid	0088	75	poly 55	Clear liquid	Caustic Soda	pH 14	
alkaline liquid	0089	75	poly 30	Dark liquid	Boiler aid	pH 14	
special waste	0090	<25	poly 30	clear liquid	sodium sulfite		into #091
special waste	0091	<25	poly 30	white solid	sodium sulfite	pH 5	contains #090
acidic liquid	0092	100	<5 gl glass	Clear liquid	Sulfuric Acid	pH 0	into #304
acidic liquid	0093	100	<5 gal poly	Clear liquid	London Labs	pH 3	into #304
acidic liquid	0094	50	<5 gal poly	Clear liquid	"none"	pH 4	into #304
non-RCRA solids	0095	75	<5 gal steel	gold liquid	"none"	all negative	into #070
solvent/paint	0096	50	<5 gal steel	brown liquid	3M Brand	flammable/combust.	into #303

MASTER DRUM LOG
TOLEDO PLATE AND WINDOW GLASS

WASTE STREAM	DRUM #	% FULL	DRUM TYPE	CONTENTS DESCRIPTION	LABELS/MARKINGS	HAZ CAT RESULTS	DISPOSAL
solvent/paint	0097	100	<5 gal steel	creamy liquid	resin hardener	flammable/combust.	into #303
solvent/paint	0098	50	<5 gal steel	clear, thick liquid	rubber/gasket glue	flammable/combust.	into #303
solvent/paint	0099	100	<5 gal glass	clear liquid	"eye lotion"	all negative	into #303
non-RCRA solids	0100	50	<5 gal steel	white soild	polishing compound	all negative	into #070
solvent/paint	0101	75	<5 gal steel	red liquid	"none"	flammable/combust.	into #303
solvent/paint	0102	100	<5 gal steel	thick grey liquid	epoxy adhesive	flammable/combust.	into #303
solvent/paint	0103	100	<5 gal steel	brown liquid	"none"	flammable/combust.	into #303
solvent/paint	0104	100	<5 gal steel	creamy liquid	epoxy resin	flammable/combust.	into #303
non-RCRA solids	0105	50	<5 gal steel	bronze powder	none	all negative	into #070
solvent/paint	0106	100	<5 gal steel	clear liquid	neoprene thinner	flammable/combust.	into #303
solvent/paint	0107	50	<5 gal steel	white liquid	semi-gloss paint	flammable/combust.	into #303
solvent/paint	0108	50	<5 gal steel	rubbery liquid	brushable urethane	flammable/combust.	into #303
solvent/paint	0109	50	<5 gal poly	red liquid	curing agent	flammable/combust.	into #303
solvent/paint	0110	50	<5 gal steel	clear liquid	Devcon cleaner	flammable/combust.	into #303
solvent/paint	0111	50	<5 gal steel	clear liquid	molybdenum disulfide	all negative	into #303
solvent/paint	0112	50	<5 gal poly	clear liquid	copper titration sol	all negative	into #303
solvent/paint	0113	75	<5 gal poly	clear liquid	Mi titrating sol.	all negative	into #303
solvent/paint	0114	100	<5 gal poly	clear liquid	EDTA standard	all negative	into #303
solvent/paint	0115	100	<5 gal steel	oil	Rust solvo	flammable/combust.	into #303
solvent/paint	0116	50	<5 gal steel	thick glue	Magic gasket compoun	flammable/combust.	into #303
solvent/paint	0117	50	<5 gal poly	clear liquid	silver titrating sol	all negative	into #303
solvent/paint	0118	100	1 gal steel	white liquid	white paint	flammable/combust.	into #303
solvent/paint	0119	100	1 gal steel	clear liquid	waterproofing	flammable/combust.	into #303
solvent/paint	0120	50	<5 gal steel	cream liquid	Anderson paint	flammable/combust.	into #303
solvent/paint	0121	50	<5 gal steel	blue liquid	Pittsburg Paint	flammable/combust.	into #303
solvent/paint	0122	50	<5 gal glass	clear liquid	Lehigh Valley Chem.	all negative	into #303
alkaline liq/sol	123&123A	50	<5 gal poly	clear liquid	Ammonium hydroxide	pH 14	into #301 (A in #63)
solvent/paint	0124	75	<5 gal poly	clear liquid	Kiwi Inks	flammable/combust.	into #303
solvent/paint	0125	100	<5 gal steel	red oil	Ditto Fluid	flammable/combust.	into #303
alkaline liquid	0126	75	<5 gal poly	clear liquid	Cerium oxide cleaner	pH 14	into #301
solvent/paint	0127	75	<5 gal poly	oil	pulsalube	flammable/combust.	into #303
solvent/paint	0128	25	<5 gal steel	liquid	Gaco	flammable/combust.	into #303
solvent/paint	0129	75	<5 gal steel	liquid	Gaco	flammable/combust.	into #303
solvent/paint	0130	100	<5 gal steel	liquid	Permatex	flammable/combust.	into #303
solvent/paint	0131	50	<5 gal steel	white powder	EMCO Boric acid	all negative	into #303
solvent/paint	0132	100	3 lb can	clear liquid	none	all negative	into #303
solvent/paint	0133	100	1 gal steel	light orange liquid	3M Brand	flammable/combust.	into #303
solvent/paint	0134	75	1 gal steel	black liquid	Stencil Ink	flammable/combust.	into #303
non-RCRA solid	0135	<25	<5 gal poly	white powder	London Labs	all negative	into #070
solvent/paint	0136	50	1 gal steel	black liquid	Stencil Ink	flammable/combust.	into #303
solvent/paint	0137	100	1 gal steel	yellow sludge	adhesive	flammable/combust.	into #303
alkaline liquid	0138	50	3 lb can	grey sludge	none	pH 11	into #301
solvent/paint	0139	75	1 gal steel	clear liquid	Ditto fluid	flammable/combust.	into #303
solvent/paint	0140	25	1 gal steel	clear liquid	Methyl Alcohol	flammable/combust.	into #303
solvent/paint	0141	75	1 gal steel	clear liquid	1-1-1Trichloroethane	all negative	into #303
non-RCRA solid	0142	<25	<5 gal poly	black powder	Silicone Carbide	all negative	into #070
solvent/paint	0143	50	1 gal steel	white sludge	Latex paint	flammable/combust.	into #303
non-RCRA solid	0144	50	<5 gal steel	grey sludge	Sodium silicate	all negative	into #070
solvent/paint	0145	100	1 gal glass	clear liquid	Denatured alcohol	flammable/combust.	into #303

MASTER DRUM LOG
TOLEDO PLATE AND WINDOW GLASS

WASTE STREAM	DRUM #	% FULL	DRUM TYPE	CONTENTS DESCRIPTION	LABELS/MARKINGS	HAZ CAT RESULTS	DISPOSAL
Solvent/paint	0146	50	Steel 55	Amber liquid	SOHIO-SOXIUIS	Flammable/Combust.	into #0300
Solvent/paint	0147	75	Steel 5 gal	black solid	Tar based roof patch	Flammable/Combust.	into #0300
Solvent/paint	0148	50	Steel 5 gal	black liquid	Xylene	Flammable/Combust.	into #0300
Solvent/paint	0149	100	Steel 5 gal	brown liquid	Lubrication oil	Flammable/Combust.	into #0303
non-RCRA solid	0150	25	5 gal poly	white solid	Miramax-8	all negative	into #070
Solvent/paint	0151	50	Steel 5 gal	black solid	"none"	Flammable/Combust.	into #302
Solvent/paint	0152	50	Steel 5 gal	grey, gummy	"none"	Flammable/Combust.	into #0300
non-RCRA solid	0153	50	Fiber 5 gal	grey, granular	"none"	all negative	into #070
alkaline liquid	0154	<25	<5 gal poly	grey liquid	"none"	pH 14	into #301
acidic liquid	0155	75	5 gal. poly	clear liquid	"none"	pH 3	into #304
alkaline liquid	0156	25	5 gal. poly	clear liquid	"none"	pH 14	into #301
alkaline liquid	157&157A	25	5 gal. poly	clear liquid	"none"	pH 14	into #301
acidic liquid	0158	25	5 gal. poly	clear liquid	London Labs	pH 1	into #304
acidic liquid	0159	<25	5 gal. poly	clear liquid	"none"	pH 4	into #304
acidic liquid	0160	<25	5 gal. poly	clear liquid	"none"	pH 4	into #304
alkaline liquid	0161	50	5 gal. poly	clear liquid	"none"	pH 14	into #301
acidic liquid	0162	25	5 gal. poly	clear liquid	London Labs	pH 1	into #304
acidic liquid	0163	50	5 gal. poly	green liquid	"none"	pH 0	into #304
alkaline liquid	0164	<25	5 gal. poly	clear liquid	London Labs	pH 14	into #301
Solvent/paint	0165	75	5 gal steel	yellow liquid	"none"	Flammable/Combust.	into #300
alkaline liquid	0166	50	5 gal. poly	clear liquid	20% caustic soda	pH 14	into #301
acidic liquid	0167	75	5 gal. poly	2 phase liquid	"none"	pH 2	into #304
alkaline liquid	0168	25	5 gal. poly	blueish liquid	"none"	pH 14	into #301
non-RCRA solid	0169	50	5 gal. poly	brown powder	Rhodite #19	pH 4	into #070
caustic solid	0170	75	5 gal. poly	grey solidified	"none"	pH 14	into #063
alkaline liquid	0171	50	1.5 gal poly	light green liquid	hudson sprayer	pH 10	into #301
non-RCRA solid	0172	75	5 gal steel	small white beds	"none"	all negative	into #070
Solvent/paint	0173	<25	<5 gal steel	yellow/brown liquid	"none"	Flammable/Combust.	into #300
Solvent/paint	0174	75	5 gal. poly	green solid	"none"	Flammable/Combust.	into #300
Solvent/paint	0175	25	5 gal. poly	grey solid	"none"	Flammable/Combust.	into #300
Solvent/paint	0176	75	5 gal. steel	Amber liquid	Lubriplate	Flammable/Combust.	into #303
Solvent/paint	0177	100	5 gal. steel	Amber liquid	Lubriplate	Flammable/Combust.	into #303
Solvent/paint	0178	50	5 gal. poly	thin black liquid	Miramak Polishing	Flammable/Combust.	into #302
Solvent/paint	0179	75	5 gal steel	thin black liquid	"none"	Flammable/Combust.	into #300
Solvent/paint	0180	50	5 gal. poly	black, tacky solid	Permatex	Flammable/Combust.	into #302
Solvent/paint	0181	50	5 gal steel	clear, oily liquid	FactoPore T-85	Flammable/Combust.	into #300
Solvent/paint	0182	25	5 gal steel	black liquid	Monte Quality Prod.	Flammable/Combust.	into #300
Solvent/paint	0183	<25	5 gal steel	Clear liquid	Lub oil-BP Oil	Flammable/Combust.	into #300
Solvent/paint	0184	100	5 gal poly	orange liquid	cerium oxide	Flammable/Combust.	into #300
Solvent/paint	0185	100	5 gal steel	oily liquid	FactoPure T-85	Flammable/Combust.	into #300
alkaline liquid	0186	75	5 gal poly	orange liquid	Salem Distrib.	pH 11	into #301
Solvent/paint	0187	100	5 gal poly	clear liquid	polishing compound	Flammable/Combust.	into #300
non-RCRA solid	0188	50	5 gal poly	brown solid	bonding compound	pH 10	into #070
Solvent/paint	0189	75	5 gal steel	Amber oil	lubriplate	Flammable/Combust.	into #300
Solvent/paint	0190	25	5 gal poly	black, tacky	roofing cement	Flammable/Combust.	into #300
Solvent/paint	0191	<25	5 gal poly	grey tacky	Epoxy hardener/base	Flammable/Combust.	into #303
alkaline liquid	0192	75	5 gal poly	orange liquid	Miramax M	pH 11	into #301
Solvent/paint	0193	50	5 gal steel	dark amber oil	80W-140	Flammable/Combust.	into #300
Solvent/paint	0194	75	5 gal poly	black liquid	"none"	Flammable/Combust.	into #302

MASTER DRUM LOG
TOLEDO PLATE AND WINDOW GLASS

WASTE STREAM	DRUM #	% FULL	DRUM TYPE	CONTENTS DESCRIPTION	LABELS/MARKINGS	HAZ CAT RESULTS	DISPOSAL
Solvent/paint	0195	25	5 gal poly	grey liquid	"none"	Flammable/Combust.	into #300
Solvent/paint	0196	50	5 gal poly	yellowish liquid	"none"	Flammable/Combust.	into #302
Solvent/paint	0197	100	5 gal poly	black liquid	"none"	Flammable/Combust.	into #302
Solvent/paint	0198	100	5 gal poly	black liquid	"none"	Flammable/Combust.	into #302
Solvent/paint	0199	100	5 gal poly	black liquid	"none"	Flammable/Combust.	into #302
Solvent/paint	0200	100	5 gal poly	black liquid	"none"	Flammable/Combust.	into #302
Solvent/paint	0201	75	5 gal steel	clear liquid	Mineral Spirits 663	Flammable/Combust.	into #302
Solvent/paint	0202	<25	5 gal steel	yellowish liquid	"none"	Flammable/Combust.	into #302
Solvent/paint	0203	50	5 gal steel	liquid	Butyl Cellosolve	Flammable/Combust.	into #302
Solvent/paint	0204	100	5 gal steel	clear liquid	Xylol	Flammable/Combust.	into #302
Solvent/paint	0205	25	5 gal steel	clear liquid	Xylol	Flammable/Combust.	into #302
Solvent/paint	0206	75	5 gal steel	clear liquid	Xylol	Flammable/Combust.	into #302
alkaline liquid	0207	<25	5 gal poly	green liquid	potassium hydroxide	pH 14	into #301
Solvent/paint	0208	100	Steel 55	Clear liq/Grey solid	Mirror Backing	Flammable/Combust.	
caustic solid	0209	50	Steel 55	white powder	none	pH 10	
non-RCRA solids	0210	50	Steel 55	orange solid/powder	none	all negative	
caustic solid	0211	50	Steel 55	black granular	none	pH 10	
caustic solid	0212	<25	Steel 55	black granular	none	pH 10	
non-RCRA solids	0213	50	30 gal steel	brown paste	grease	all negative	
	0214						
	0215						
acidic liquid	0216	50	1/2 pint	brown liquid	"for silver"	pH 3	into #0304
Solvent/paint	0217	100	8 oz poly	clear liquid	Ion X-change	Flammable/Combust.	into #0303
non-RCRA solids	0218	50	1 lb can	brown paste	wheelbearing grease	all negative	into #0056
Solvent/paint	0219	50	1/4 gal	liquid	CV1946 Additive	Flammable/Combust.	into #0303
alkaline liquid	0220	75	1 qt. poly	blue liquid	bathroom cleaner	pH 14	into #301
Solvent/paint	0221	100	8 oz poly	clear liquid	First Aid Treatment	all negative	into #0303
Solvent/paint	0222	75	8 oz poly	clear liquid	First Aid Treatment	all negative	into #0303
Solvent/paint	0223	25	1 qt	clear liquid	no label	all negative	into #0303
Solvent/paint	0224	50	16 oz poly	black liquid	Proline colorant	Flammable/Combust.	into #0303
acidic liquid	0225	75	1 qt plastic	grey liquid	illegible	pH 3	into #0304
Solvent/paint	0226	100	8 oz poly	black liquid	London Labs	all negative	into #0303
acidic liquid	0227	25	8 oz poly	brown liquid	London Labs	pH 3	into #0304
acidic liquid	0228	25	8 oz poly	brown liquid	London Labs	pH 3	into #0304
caustic solid	0229	50	500gm bottle	yellow solid	ferric chloride	pH 11	into #063
caustic solid	0230	<25	500gm bottle	yellow solid	ferric chloride	pH 11	into #063
caustic solid	0231	75	steel 55	purple liquid	soap cleaner	pH 14	
alkaline liquid	0301	50	poly 55	liquid	"none"	pH 14	bulked containers
solvent/paint	0302	100	steel 55	liquid	"none"	flammable/combust.	bulked containers
solvent/paint	0303	75	steel 55	liquid	"none"	flammable/combust.	bulked containers
acidic liquids	0304	50	poly 55	clear liquid	"none"	low pH	contains small cans
	0305						
	0306						
	0307						

ATTACHMENT C

AIR MONITORING

ANALYTICAL RESULTS

TOLEDO PLATING AND WINDOW GLASS
SAMPLE RESULTS
FOR
PHASE 6

UNITS: Fibers/cubic centimeter (F/cc) for PCM
or
Structures/mm2 (Struct/mm2) for TEM

SAMPLE	DATE	LOCATION	SAMPLER	TYPE	PROJECT	RESULTS
PA601	9/11	Central area of Phase 6	Hi-Vol	PCM	Preabatement	0.021 F/cc
DA601	9/11	East section of Phase 6	Low-Flow	PCM	Abatement	0.018 F/cc
CAA601	9/14	Central area of Phase 6	Hi-Vol	TEM	Clearance	VOID **
CAA601A	9/14	North section of Phase 6	Hi-Vol	TEM	Clearance	165.3 Struct/mm2 *
CAA601B	9/14	East section of Phase 6	Hi-Vol	TEM	Clearance	VOID **
NGDA6	9/14	Near the Negative air Machine	Low-Flow	PCM	Abatement	<0.017 F/cc
FBDA6	9/14	Outside, near Phase 6	Low-Flow	PCM	Abatement	<0.015 F/cc
CAA602	9/15	2nd Clearance sample for Phase 6	Hi-Vol	TEM	Clearance	145.5 Struct/mm2 *
CAA602A	9/15	2nd Clearance sample for Phase 6	Hi-Vol	TEM	Clearance	119.05 Struct/mm2 *
CAA602B	9/15	2nd Clearance sample for Phase 6	Hi-Vol	TEM	Clearance	185.19 Struct/mm2 *
NGO603	9/16	Outside the Neg. air machine	Low-Flow	PCM	Abatement	<0.004 F/cc
A290463	9/28	PCM sample for Phase 6	Hi-Vol	PCM	Clearance	<0.002 F/cc
A290471	9/28	PCM sample for Phase 6	Hi-Vol	PCM	Clearance	0.002 F/cc
A290480	9/28	PCM sample for Phase 6	Hi-Vol	PCM	Clearance	<0.002 F/cc
CAA603	9/28	3rd Clearance sample for Phase 6	Hi-Vol	TEM	Clearance	<20.7 Struct/mm2
CAA603A	9/28	3rd Clearance sample for Phase 6	Hi-Vol	TEM	Clearance	<20.7 Struct/mm2
CAA603B	9/28	3rd Clearance sample for Phase	Hi-Vol	TEM	Clearance	<20.7 Struct/mm2

* The sample was appove the AHERA clearance level of 70 structures/mm2
** The sample had greater than 25% particulate loading, could not analyze.

TOLEDO PLATING AND WINDOW GLASS
SAMPLE RESULTS
FOR
PHASE 5

UNITS: Fibers/cubic centimeter (F/cc) for PCM
or
Structures/mm2 (Struct/mm2) for TEM

SAMPLE	DATE	LOCATION	SAMPLER	TYPE	PROJECT	RESULTS
NG4501	9/16	Southeast area near Neg. air	Low-Flow	PCM	Preabatement	<0.003 F/cc
5BACK01	9/17	Northwest section of Phase 5	Low-Flow	PCM	Preabatement	0.046 F/cc
PA4502	9/17	South section of Phase 5	Low-Flow	PCM	Preabatement	<0.017 F/cc
DA501	9/18	Phase 5	Low-Flow	PCM	Abatement	0.011 F/cc
DA5SCF	9/18	South section of Phase 5	Low-Flow	PCM	Abatement	0.023 F/cc
DA5SCF2	9/18	Central area of Phase 5	Low-Flow	PCM	Abatement	0.020 F/cc
MD501	9/23	Southwest Section of Phase 5	Low-Flow	PCM	Abatement	<0.008 F/cc
S501	9/23	West section, near Phase 6	Low-Flow	PCM	Abatement	<0.006 F/cc
A290476	9/28	Near the Phase 6 entrance	Low-Flow	PCM	Abatement	0.010 F/cc
A290481	9/28	On the ACM boxes in Phase 5	Low-Flow	PCM	Abatement	0.006 F/cc
A290459	9/28	Near ACM boxes	Low-Flow	PCM	Abatement	<0.008 F/cc
CAA501	9/29	Northwest corner of Phase 5	Hi-Vol	TEM	Clearance	<20.7 Strut/mm2
CAA501A	9/29	Center area near office	Hi-Vol	TEM	Clearance	41.3 Struct/mm2
CAA501B	9/29	South west area near Phase 6	Hi-Vol	TEM	Clearance	<20.7 Struct/mm2

TOLEDO PLATING AND WINDOW GLASS
SAMPLE RESULTS
FOR
PHASE 4

UNITS: Fibers/cubic centimeter (F/cc) for PCM
or
Structures/ mm2 (Struct/mm2) for TEM

SAMPLE	DATE	LOCATION	SAMPLER	TYPE	PROJECT	RESULTS
PA4CLNUP	9/18	SW corner near Phase 5	Low-Flow	PCM	Preabatement	<0.007 F/cc
PA4CLN2	9/18	Central area of phase 4	Low-Flow	PCM	Preabatement	<0.009 F/cc
WALKWAY	9/18	North section of Phase 4	Low-Flow	PCM	Preabatement	<0.009 F/cc
S401	9/23	SE section of Phase 4	Low-Flow	PCM	Preabatement	<0.009 F/cc
PW401	9/25	Central area of Phase 4	Low-Flow	PCM	Abatement	<0.038 F/cc
CAA401	9/29	South section of Phase 4	Hi-Vol	TEM	Clearance	20.7 Struct/mm2
CAA401A	9/29	Near office area in Phase 4	Hi-Vol	TEM	Clearance	16.5 Struct/mm2
CAA401B	9/29	Near tank area in North section	Hi-Vol	TEM	Clearance	49.6 Struct/mm2

TOLEDO PLATING AND WINDOW GLASS
SAMPLE RESULTS
FOR
PHASE 3

UNITS: Fibers/cubic centimeter (F/cc) for PCM and
Structures/mm2 (Struct/mm2) for TEM

SAMPLE	DATE	LOCATION (PHASE 3)	SAMPLER	TYPE	PROJECT	RESULTS
PA3201	9/16	NE corner near Phase 2 entrance	Low-Flow	PCM	Preabatement	VOID **
NG301	9/22	NW corner, near the Neg. Air	Low-Flow	PCM	Preabatement	<LOD
BG03TI	9/22	Bag out area of Phase 3	Low-Flow	PCM	Preabatement	<0.005 F/cc
BGOUTO	9/22	Bag out area outside Phase 3	Low-Flow	PCM	Preabatement	<0.005 F/cc
BGOI2	9/23	Bag out area of Phase 3	Low-Flow	PCM	Preabatement	<0.007 F/cc
PA301	9/23	NW area of Phase 3	Low-Flow	PCM	Preabatement	0.005 F/cc
PA302	9/23	NE area of Phase 3	Low-Flow	PCM	Preabatement	<0.006 F/cc
NA302	9/24	NW corner, near the Neg. Air	Low-Flow	PCM	Preabatement	<0.005 F/cc
PA304	9/25	Central area of Pase 3	Low-FLow	PCM	Preabatement	<0.045 F/cc
A290456	9/28	NE area during cleanup	Low-Flow	PCM	Preabatement	0.023 F/cc
A290464	9/28	NW corner, near the Neg. Air	Low-Flow	PCM	Preabatement	<0.009 F/cc
A290470	9/29	NW corner, near window	Low-Flow	PCM	Preabatement	<0.005 F/cc
A290469	9/29	NW area	Low-Flow	PCM	Preabatement	<0.005 F/cc
A290462	9/29	South section of Phase 3	Low-Flow	PCM	Preabatement	<0.006 F/cc
A290450	9/29	North section of Phase 3	Low-Flow	PCM	Preabatement	<0.005 F/cc
P3105	10/5	South section, near pipes	Hi-Vol	PCM	Abatement	0.010 F/cc
P3105A	10/5	North section of Phase 3	Hi-Vol	PCM	Abatement	0.003 F/cc
P3106	10/6	South sect., Insulation Removal	Hi-Vol	PCM	Abatement	0.005 F/cc
P3106A	10/6	North section	Hi-Vol	PCM	Abatement	0.002 F/cc
P3106B	10/6	South Sec., on scaffolding	Low-Flow	PCM	Abatement	0.023 F/cc
CS301	10/10	SE section of Phase 3	Hi-Vol	TEM	Clearance	82.6 Stuct/mm2 *
CS311	10/10	SE section of Phase 3	Hi-Vol	PCM	Clearance	<0.003 F/cc
CS301A	10/10	SW section of Phase 3	Hi-Vol	TEM	Clearance	16.5 Struct/mm2
CS311A	10/10	SW section of Phase 3	Hi-Vol	PCM	Clearance	<0.003 F/cc
CS301B	10/10	North section of Phase 3	Hi-Vol	TEM	Clearance	<16.5 Struct/mm2
CS311B	10/10	North section of Phase 3	Hi-Vol	PCM	Clearance	<0.004 F/cc
CS302	10/15	2nd Sample for the SE section	Hi-Vol	TEM	Clearance	<16.5 Struct/mm2

* Sample results were above the AHERA limit of 70 Structures/mm2
** Sample was overloaded with particals and could not be analyzed

TOLEDO PLATING AND WINDOW GLASS
SAMPLE RESULTS
FOR
THE PHASE 2

UNITS: Fibers/cubic centimeter (F/cc) for PCM
or
Structures/mm2 (Struct/mm2) for TEM

SAMPLE	DATE	LOCATION	SAMPLER	TYPE	PROJECT	RESULTS
P1-446	9/30	NE section, Basement stairway	Low-Flow	PCM	Preabatement	<0.026 F/cc
P2-1012	10/12	Southwest Section	Low-Flow	PCM	Abatement	0.127 F/cc
P2-1013	10/13	Southwest Section	Low-Flow	PCM	Abatement	0.039 F/cc

TOLEDO PLATING AND WINDOW GLASS
SAMPLE RESULTS
FOR
PHASE 1

UNITS: Fibers/cubic centimter (F/cc) for PCM
or
Structures/mm2 (Struct/mm2) for TEM

SAMPLE	DATE	LOCATION	SAMPLER	TYPE	PROJECT	RESULTS
P1-445	10/1	Bag-out area	Low-Flow	PCM	Preabatement	0.008 F/cc
P1-454	10/1	Near Decon zone	Low-Flow	PCM	Preabatement	0.006 F/cc
2F105A	10/5	SE area, near wood area	Low-Flow	PCM	Preabatement	0.009 F/cc
P1-108	10/8	Bag-out area	Low-Flow	PCM	Preabatement	0.005 F/cc
P1-108A	10/8	Outside, near the bag-out area	Low-Flow	PCM	Preabatement	0.007 F/cc
P1-108B	10/8	Bag-out area using Hi-Vol pump	Hi-Vol	PCM	Preabatement	Void*
P1-109	10/9	Central area	Hi-Vol	PCM	Preabatement	<0.010 F/cc
P1-109A	10/9	Bag-out area, bagging out ACM	Hi-Vol	PCM	Preabatement	0.002 F/cc
BO-109	10/9	Outside bag-out area	Low-Flow	PCM	Preabatement	<0.10 F/cc
P1-1010	10/10	Bag-out area, bagging out ACM	Low-Flow	PCM	Preabatement	<0.006 F/cc
P1-1012	10/12	East central area, by pipes	Low-Flow	PCM	Abatement	0.038 F/cc
BO-1012	10/12	Outside bag-out area	Low-Flow	PCM	Abatement	<0.005 F/cc
BO-1012A	10/12	Bag-out area	Low-Flow	PCM	Abatement	0.009 F/cc
BO-1013	10/13	Outside bag-out area	Low-Flow	PCM	Abatement	0.030 F/cc
P1-1013	10/13	SE section	Low-Flow	PCM	Abatement	Void*
CS-101	10/16	Bag-out area	Hi-Vol	TEM	Clearance	13.87 Struct/mm2
CS-101A	10/16	Central area, near pipes	Hi-Vol	TEM	Clearance	32.36 Struct/mm2
CS-101B	10/16	SW area, near corner office	Hi-Vol	TEM	Clearance	13.87 Struct/mm2

* The sample was overloaded with particales and could not be analyzed

TOLEDO PLATING AND WINDOW GLASS
SAMPLE RESULTS
FOR
THE BASEMENT AREA

UNIT: Fibers/cubic centimeter (F/cc) for PCM
or
Structures/mm2 (Struct/mm2) for TEM

SAMPLE	DATE	LOCATION	SAMPLER	TYPE	PROJECT	RESULTS
BM-440	9/30	Southeast area, Phase 2 entrance	Low-Flow	PCM	Preabatement	0.027 F/cc
BM-441	10/1	Near Phase 2 Entrance Stairway	Low-Flow	PCM	Preabatement	0.007 F/cc
BM-103B	10/3	Near Phase 2 Entrance Stairway	Low-Flow	PCM	Preabatement	0.009 F/cc
BM-106	10/6	Near Phase 2 Entrance Stairway	Low-Flow	PCM	Preabatement	0.023 F/cc
BM-106A	10/6	Near Boilerroom, Southern Section	Low-Flow	PCM	Preabatement	<0.007 F/cc
BM-108	10/8	Boilerroom	Low-Flow	PCM	Preabatement	0.006 F/cc
BM-108A	10/8	Near Phase 2 Entrance Stairway	Low-Flow	PCM	Abatement	0.007 F/cc
BM-108B	10/8	Near Phase 2 Entrance Stairway	Low-Flow	PCM	Abatement	0.011 F/cc
BM-109	10/9	Northeast section near Boiler area	Low-Flow	PCM	Abatement	0.021 F/cc
BM-1010	10/10	Northeast section near Boiler area	Low-Flow	PCM	Abatement	<0.006 F/cc
BM-1010A	10/10	Boilerroom	Low-Flow	PCM	Abatement	0.013 F/cc
CS-BM1	10/15	Boilerroom	Hi-Vol	TEM	Clearance	ND
CS-BM1A	10/15	Near Phase 3 Entrance Stairway	Hi-Vol	TEM	Clearance	13.87 Struct/mm2
CS-BM1B	10/15	Northeast section near Boiler area	Hi-Vol	TEM	Clearance	ND

ND is non-detect

TOLEDO PLATING AND WINDOW GLASS
SAMPLE RESULTS
FOR
THE SECOND FLOOR

UNITS: Fibers/cubic centimeter (F/cc) for PCM
or
Structures/mm2 (Struct) for TEM

SAMPLE	DATE	LOCATION	SAMPLER	TYPE	PROJECT	RESULTS
2F-475	9/30	NE section, near the window area	Low-Flow	PCM	Preabatement	<0.026 F/cc
2F-453	10/1	Main floor area on the 2nd floor	Low-Flow	PCM	Preabatement	<0.006 F/cc
2F-432	10/2	NW corner of the 2nd floor	Low-Flow	PCM	Abatement	<0.010 F/cc
2F-433	10/2	SE corner of the 2nd floor	Low-Flow	PCM	Abatement	<0.009 F/cc
2F-103	10/3	NE corner of the 2nd floor	Low-Flow	PCM	Abatement	0.009 F/cc
2F-103A	10/3	NE 2nd floor entrance stairway	Low-Flow	PCM	Abatement	<0.006 F/cc
2F-105	10/5	NE 2nd Floor entrance stairway	Low-Flow	PCM	Abatement	0.009 F/cc
CS-2F1	10/5	SE section, back room area	Hi-Vol	TEM	Clearance	<13.8 Struct/mm2
CS-2F1A	10/5	Central area, 2nd floor	Hi-Vol	TEM	Clearance	13.8 Struct/mm2
CS-2F1B	10/5	NW section of the 2nd floor	Hi-Vol	TEM	Clearance	16.5 Struct/mm2

TOLEDO PLATING AND WINDOW GLASS
SAMPLE RESULTS
FOR
THE DECON AREA

UNITS: Fibers/cubic centimeter (F/cc) for PCM
or
Structures/mm2 (Struct) for TEM

SAMPLE	DATE	LOCATION	SAMPLER	TYPE	PROJECT	RESULTS
DECON1	9/16	Dirty room area	Hi-Vol	PCM	Abatement	0.003 F/cc
SHOWER	9/17	Shower room in the Decon trailer	Low-Flow	PCM	Abatement	0.027 F/cc
DECONA	9/18	First Dirty Room	Low-Flow	PCM	Abatement	0.009 F/cc
DECONC	9/22	Decon area before the shower	Low-Flow	PCM	Abatement	<LOD *
BCO01	9/22	Decon trailer	Low-Flow	PCM	Abatement	<0.008 F/cc
DECONC02	9/23	Decon area	Low-Flow	PCM	Abatement	Fault **
DECONC03	9/246	Decon area	Low-Flow	PCM	Abatement	0.005 F/cc

* ND = Not Detected